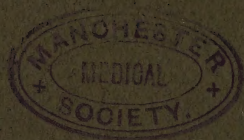


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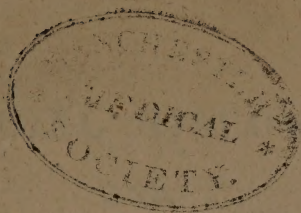


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MEDICAL HISTORIES
AND
REFLECTIONS.

MEDICAL HISTORIES

AND

REFLECTIONS,

VOLUME I.

BY

JOHN FERRIAR, M. D.

PHYSICIAN TO THE MANCHESTER INFIRMARY,
AND LUNATIC HOSPITAL.

Hæc medendi disciplina si cum hypotheticæ splendore, fastu et magnificentia conferatur, tenuis quidem, imo vilis ac contemnenda videbitur. At in illa nihil salutaris nec vitalis inest, verum mira duntaxat ramorum, foliorumve luxuries, ad aspectum quidem pulchra, sed statim flaccescens, ubi primum eam novitatis gratia tanquam succus defecerit. Hæc vero, cum non ex rebus fictis, commentitiisque constet, non ostentationis, nec inanis, sed quæ in curandis hominibus sita est veræ, gravis, solidæque gloriæ cupida, nec ad ostentandos flores, sed ad uberrimos, et jucundissimos fructus proferendos comparata, in dies magis, magisque crescit, ac vegetior fit.

Bagliv. Prax. Med. Lib. I. Cap. i.

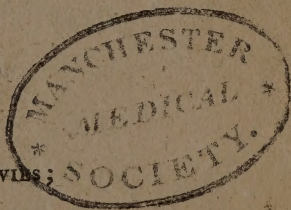
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1810,



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MEDICAL HISTORIES

AND

SYMPTOMS

VOLUME I



PRINTED BY THE NATIONAL ANTHROPOLOGICAL ARCHIVES

THE HISTORY OF THE MEDICAL ARTS IN THE
MIDDLE AGES. BY J. B. DE MEYER.
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MODERN AGES. BY J. B. DE MEYER.
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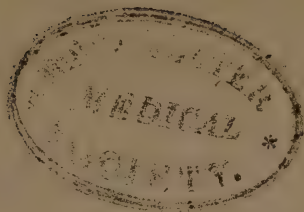
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J. LINDSEY, WARRINGTON.

1810



TO

RICHARD SHARP, Esq. M. P.

THIS WORK

IS DEDICATED

BY HIS

AFFECTIONATE FRIEND,

THE AUTHOR.

DEDICATION

TO THE

Original Edition of the First Volume.

TO

THOMAS PERCIVAL, M. D.

F. R. S. &c.

DEAR SIR,

THE ceremony of dedication is generally so useless, or so humiliating, as to detract considerably from the dignity of men of letters. But medical authors, having the good fortune to write for their proper judges, are most inexcusable, if they solicit any other patronage than that of professional merit. In giving the ornament of your name to this little book, therefore, I only place my work under its natural

natural protector, a medical philosopher, zealous for the improvement of his science, and not less distinguished by liberality of conduct towards his younger brethren of the profession, than by those qualities which have gained him, in so eminent a degree, the confidence of the public.

When I add the consideration, that I have the happiness of addressing a friend, as well disposed to favour, as entitled to decide the fortune of these pages, it is with singular pleasure that I embrace this opportunity of acknowledging myself,

DEAR SIR,

Your most obliged,

MANCHESTER, and most obedient servant,
Mosely-Street, April 30, 1792.

THE AUTHOR.

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P R E F A C E

TO THE

PRESENT EDITION.

A Republication of these volumes has long been demanded by the Booksellers. It was my wish to have given them a complete revisal, and to have added several cases: but unavoidable circumstances have obliged me to contract my plan. Yet as seventeen years have

have elapsed since the first volume made its appearance, during which my opportunities of observation have been greatly enlarged, I could not think of again meeting the public eye, without introducing some degree of alteration and improvement.

In the present state of the profession, a critical view of our actual knowledge of diseases, and of the prevailing methods of treatment, would be a most valuable work, if judiciously executed. To an individual, great benefit must always result, from reviewing his own opinions and practice, from rejudging himself, and endeavouring to improve
on

on his former exertions. This task I have attempted, in the present edition, as far as my leisure would permit, and with all the impartiality of which I am capable.

In some of the discussions, which will be found augmented, I had some temptations to controversy; but I have preferred a convincing display of facts, from regard to the solemn and sacred nature of professional duty. A medical writer, who suffers personal considerations to warp his report of facts, is the worst of criminals.

Physicians should never lose sight of the high descent of their science.

“ Primóque,

xiv *Preface to the Present Edition.*

“ Primóque,” says Celsus, “ Medendi
“ Scientia Sapientiæ pars habebatur,
“ ut et morborum curatio, et rerum
“ naturæ contemplatio sub iisdem au-
“ toribus nata sit: scilicet his maximé
“ requirentibus qui corporum suorum
“ robora quieta cogitatione, nocturna-
“ que Vigilia minuerant. Ideoque
“ multos ex Sapiaentia professoribus
“ peritos ejus fuisse, accepimus.” And
even the elder Pliny, who has said so
many severe fine things against me-
dical men, has assigned an august
origin to medicine itself; “ Diis pri-
“ mum inventores suos assignavit, et
“ cælo dicavit: necnon et hodie mul-
“ tifariam

“tifariam ab oraculis medicina peti-
“tur.” *

It was my original intention to have published a volume of this work, once in three or four years, for which my practice would furnish sufficient materials, and which might have been executed by the regular employment of a moderate portion of time, but in this design I have been disappointed:

Οὐ γὰρ ἕα πόνος ἀλλ', ὃν Ἀργυρότοξ' ἔγειρεν.

Ιλιάδ. Ε. l. 517.

* *Plinii Hist. Natural. Lib. xxix. Præm.*

P R E F A C E

TO THE

FIRST EDITION OF THE FIRST VOLUME.



THE following pages contain a selection of cases and observations, chiefly drawn from my practice at the Manchester Infirmary. The extended plan of that institution affords the most favourable opportunities to a diligent observer, for ascertaining
B with

with precision many facts in the history of diseases, and for appreciating the value of established methods of cure. Some part of the fruits of such advantages should therefore revert to the public, in acknowledgment of the good it bestows. And something may be added to the stock of science, by unwearied attention to a considerable number of patients, indiscriminately taken, in a great town.

The history of diseases has been much enriched, since the publication of Lord Verulam's *Treatise on the Advancement of Sciences*; in which, with his usual sagacity, he has recommended full descriptions of the morbid appearances

appearances in every disorder, and careful dissections illustrative of them. From that time, observation has been generally pursued, equally as the road to truth and reputation. Wherever the observer has delivered faithfully the result of a great number of facts, or has possessed that uncommon talent of concluding accurately from a few particulars to generals, science has been improved, and sometimes extended. And several authors preserve a distinguished place in medical libraries, because their descriptions of diseases are accurate and intelligible, although their particular systems, and modes of cure, be in a great measure exploded. But the method, so fashionable

B 2

shionable at present, of publishing single cases, appears not well calculated to enlarge our knowledge, either of the nature or cure of diseases.* On a single instance of success, however faithfully delivered, no point of practice can rest; and although minuteness in descriptions of the natural course of symptoms is recommended by our best systematic writers, since Lord Verulam, yet the great and unnecessary prolixity of modern case-writers could never be intended by them; it is opposite, indeed, to the method of every author, eminent in

* Dr. Sydenham has expressed the same opinion of the inutility of publishing single cases.

this particular. Half a page of Are-tæus, Celsus, or Sydenham conveys more circumstances, and with a more lively impression, to the reader, than many sheets of languid narration.* One would imagine, that Quintilian was prophesying of the latter sort of medical style, in his Chapter De Perspicuitate, “ Est etiam in quibusdam
“ turba inanum verborum, qui dum
“ communem loquendi morem refor-
“ midant, ducti specie nitoris, circu-

* Neque quidpiam magis historiæ naturalis medicæ veritatem, fidelitatemque labefactavit, quam libido Auctorum in eadem exornanda, novis et elegantibus loquendi formulis, subtilibus speculationibus, copiosis auctorum citationibus, similibusque Lectorum gratia excogitatis. Bagliv. Prax. Med. p. 172.

“meunt omnia copiosa loquacitate quæ
“dicere volunt.”

In the succeeding selection, the cases are generally given as briefly as possible. My principal aim has been, to conclude, by direct induction from a sufficient number of facts, respecting the effects of certain modes of practice.* I have found, by some length of experience, that it is absolutely necessary for a physician, who would do justice to his patients, to

* If some exceptions should appear among these cases, I hope it is chiefly owing to the singularity of the complaint described, or to the necessity of elucidating a particular train of symptoms in a minute manner.

keep

keep a regular account of his success in the treatment of difficult diseases.* Some particular combinations, against which the severest mind cannot always guard itself, or some partial chain of events connected with the exhibition of a medicine, will frequently lead him to false conclusions, if he trust his memory alone, or neglect long to

* Hanc vero remediorum intimiorem cognitionem animo rite concipiendi, vix certior, rectior et compendiosior datur via, ac per observationes et morborum historias, quæ simul medicaminum propinatorum usum, genuinam applicationem et certos effectus recensent atque complectuntur. Et hinc demum vera, certa et non fallax de remediorum viribus et efficacia, quæ tantopere in desiderio est, experientia, proficiscitur et medenti innotescit. Hoffman, tom. II. sect. 1. cap. 2.

adjust his *Adversaria*. The instances of good or ill success are likewise often separated by intervals of time, and other pursuits, which deaden or obliterate the force of comparison. By supporting a journal of the treatment and events of certain diseases, on the contrary, a physician supplies himself with data, on which he can reason with confidence, and act with satisfaction, in forming a plan of cure for every new patient.

One of the chief obstacles to accuracy in relating observations, has been the unhappy proneness of medical writers to form systems. Such gentlemen

lemen would do well to read Mr. Locke's chapters on the abuse of language. A system ought to be nothing more than an arrangement of facts, in convenient order for the memory. So far, systems are neither true nor false; it is only of importance that the facts comprehended be true and well told. Yet to the false idol of system, particular truths, which are our proper objects, have too often been sacrificed. As I have long since resigned all exclusive preference for any system, and contented myself with using whatever each contains applicable to practice, the freedom of these cases will not, probably, be disputed.

I have

I have endeavoured to avoid many quotations.* When any passage of importance occurred to me, connected with a series of my observations, I have endeavoured to recal it. But I have been at no pains to ascertain whether any detached facts had been anticipated. Few claims to originality in medical books can now be supported. The assertion of a spasmodic state of the extreme vessels, in the cold stage of fevers, for example, commonly ascribed to Dr. Hoffman,

* It was smartly and justly said, however, by Gabriel Naudé (who seldom ventured to hold an opinion, for which he could not produce classical authority) that they only are averse to quotations who never expect to be quoted themselves.

was first made by Dr. Piens, in his comprehensive Treatise De Febre. But when I have entered on the use of a medicine, on the authority of any writer, I have always been careful to compare his experience with mine, and to make every necessary allowance where a variation appeared. Every man is partial to his own experience, and reckons it sure; and I have used my utmost caution not to urge my conclusions beyond the strength of the facts.

The Essay on the origin of contagious and new Diseases, was written for the Literary and Philosophical Society of Manchester, and perhaps
may

may be misplaced in this volume. Its principal object, indeed, is not entirely medical; but as it suggests a motive for active benevolence, which has been little considered before, and involves many topics connected with one part of the observations, I have ventured to insert it, in hopes that its design may cover its faults.

Before I conclude, I cannot avoid acknowledging my obligations, for the design of this little work, and for several practical hints pursued in it, to the valuable publications of Dr. HOME. In his *Medical Facts and Experiments*, and his *Clinical Experiments, Histories and Dissections*, he has pointed
out

out the only certain road to solid medical knowledge, and has laboured it with success. It is indeed only a fresh opening of the old Hippocratic way; at once decorated and obstructed by the remains of former writers. A man of science will neither condemn them with the ignorant, as rubbish, nor tremble with superstitious fear to remove them, where their place can be better supplied by fresh materials.

MEDICAL HISTORIES

AND

REFLECTIONS.



SINGULAR PARALYTIC AFFECTION.

A STRONG, lusty, middle-aged man was suddenly affected with a tingling pain, succeeded by numbness, in the thumb and fingers of his right hand. In a few minutes, the parts became black, and the pain, extending along the arm and shoulder, darted into the right side of the mouth, just at the angle of the lips. He immediately felt his speech impeded; and he articulated
with

32 SINGULAR PARALYTIC AFFECTION.

with great difficulty, and very imperfectly, till the fit was over, which was completed in the course of half an hour. The paroxysm returned once in two or three hours, observing precisely the same course. His head was not affected, during any part of its duration, either with pain or giddiness; nor had any indications of a paralytic disorder preceded the attack. His bowels were in a regular state. His tongue was white.

I examined his hand with particular care, but could not discover any marks of injury about it; and he did not recollect, after repeated inquiries, that it had sustained any violence. I ordered a blister to be immediately applied to the outside of the fore-arm, in the direction of the radius, with the view of stimulating the principal nerves supplying the fingers, and prescribed a gentle laxative.

The

The effect of the blister was decisive : as soon as it produced an effusion, the fits left him. Some irregular feelings were afterwards perceived in the fingers, but there was no approach towards another paroxysm.]

A day or two after the application of the blister, he complained of a slight head-ach, and as his pulse was very full and strong, I ordered him to lose twelve ounces of blood from the left arm. This, with a low diet, and attention to his evacuations, completed the cure, and I believe he has now remained well for near two years.

Might it not be useful, in cases of the *Aura Epileptica*, to apply blisters near the place where the principal nerves, which go to the part affected, divide?

34 UNCOMMON SPASMODIC CASE.

AN UNCOMMON SPASMODIC CASE, SUCCESSFULLY TREATED.

E. W. a girl of thirteen, had an eruption over the whole surface of the skin, of an herpetic character, and exquisitely sore. She complained also of violent pain in her stomach, which seized her at uncertain times, and was always followed by general convulsions, about the commencement of which her jaws became locked, and could not be separated till the close of the paroxysm. The duration of the fits was very unequal; generally about three or four hours; but sometimes a succession of them would happen for twenty-four hours, with hardly a perceptible interval.

I gave her small doses of opium, frequently repeated, during her intermissions,

missions, but without effect. Her jaws locked so speedily after the beginning of the fit, that no medicine could be introduced into the stomach during its continuance; and it was evident, that the only hope of a cure rested on preventing the accession, by remedies exhibited at the first signs of its approach. I therefore directed her mother, on the appearance of languor and uneasiness which preceded the pain, to make her swallow a pill, composed of half a grain of opium, two grains of musk, and two of camphor; and to repeat the dose every quarter or half hour (to a certain extent) according to the progress of the fit. After some fruitless trials, in which five grains of opium were given before the jaws locked, finding the patient sink very fast under intolerable and almost constant agony, I determined to try the effect of the combination in its full extent. At the approach of a fit (the

C 2 intermissions

intermissions of which scarcely allowed her time to receive any food) ten grains of opium, a scruple of musk, and a scruple of camphor were thrown in. The consequence was, that the pain was immediately relieved; the jaw did not fix: and the convulsions ceased. The irritation on the surface was so great, that she had very little sleep during the night; and next day the usual signs of a fit appeared, but an equal dose of the pills being administered, the threatening symptoms went off, and left her tolerably easy. After several repulses of this kind, the tendency to renew the paroxysms gradually ceased, and the opiate was proportionably diminished. The eruption decayed in the same proportion with the fits; and in a shorter time than I had expected, her skin was entirely clear, and she was able to work as usual.

I have occasionally inquired after her, and found that she has continued perfectly

fectly well. It is now two years from the attack.

It was very remarkable, that while she used so large a quantity of opium, the effects of which were so powerful on the system, she never slept above four or five hours together, and then only in the night. I have observed the same circumstance in other cases, where opium has been extensively employed. And I believe that, with prudence and attention in augmenting the doses, the fullest benefits may be derived from that remedy, without danger or inconvenience.

It must be observed, however, that fatal consequences have sometimes followed the large exhibition of opium. See a remarkable case in Dr. Percival's *Essays Medical and Experimental*, vol. I. p. 421. When such doses are continued for a length of time, it is always proper to interpose a laxative

C 3

once

once in two days, and where the symptoms are not very urgent, to intermit the use of the opium for twelve or twenty-four hours. The state of the pulse, and every circumstance indicating the state of the vital functions, must be carefully attended to, during such a course; and the practitioner must always remember, in such cases, that while a proper degree of boldness is necessary to effect a cure, temerity may produce an irreparable evil.

REMEDIES OF DROPSY.

I do not remember to have seen any comparison instituted among the various methods of reducing the swellings, by increasing the quantity of urine in this disorder. The whole tribe of diuretics is acknowledged to be uncertain, and often to disappoint
the

the most rational expectations. Practitioners are therefore perpetually in search of new remedies belonging to this class, and are too apt to over-rate the value of such discoveries. An appreciation of the diuretics we already possess would perhaps be more serviceable to medicine, than the addition of any single article of this kind. The following cases contain some facts of this nature, respecting a few of the principal remedies employed in dropsy. A series of observations, continued on the same plan, may perhaps introduce, if not a more successful, yet a safer mode of practice in this formidable disease.

DIGITALIS.

HISTORY I.

Sarah Irlam, upwards of sixty years of age, became gradually anasarcous,

C 4

and

and when I saw her first was so much swelled, as to be totally unwieldy. Her urine was very scanty. She took one grain of digitalis, and in the course of a few hours voided a great quantity of urine. She took another grain next day, which retarded her pulse, and occasioned violent sickness. The swellings were completely reduced in three or four days.

HISTORY II.

John Wilson, aged twenty-eight, had both ascites and anasarca. His belly and legs were excessively distended, and he had a tormenting cough and dyspnœa. He took one grain of digitalis daily. His urine increased in quantity but slowly. He then took a grain and half every day, which produced a large flow of urine, steadily supported, and cured him perfectly, to all appearance, in the course of a fortnight. He will be heard of again.

HISTORY

HISTORY III.

Elizabeth Hall, aged thirty-one, had become anasaruous by slow degrees, and the swelling began to make considerable progress. She took half an ounce of the infusum digitalis twice a day, without any considerable effect at first; I then interposed a grain of gamboge and half an ounce of cream of tartar, once or twice a week, according to the quantity of urine; continuing the digitalis on the other days. The urine now flowed largely; the swellings receded, and left her entirely in less than three weeks.

HISTORY IV.

John Dawson, aged fifty-five, affected with ascites and anasarca, took one grain of digitalis every day. He was cured of his dropsy in the course of a month, and no complaint remained but



but a cough, which was removed in a few weeks by the common pectoral medicines.

HISTORY V.

James Heys, aged twenty-seven, was received into the hospital, with anasarca and ascites, excessively swelled, and voiding very little urine. He took one grain of digitalis daily, which promoted a great discharge of urine, and he went out perfectly cured in three weeks.

HISTORY VI.

Elizabeth Atherton, aged nineteen, was affected with a considerable degree of anasarca, and an incipient ascites. She took digitalis in increasing doses, to the extent of four grains a day; once or twice a week, a purgative composed of gamboge and cream of tartar, in the proportions already mentioned, was

was interposed. She was cured in the space of two months.

HISTORY VII.

Ellen Farrar, admitted, April 11, 1791, aged nineteen, had anasarca swellings of the lower extremities, and a scarcity of urine. She complained likewise of oppression at her breast, of disturbed sleep, and some degree of orthopnæa. She took one grain of digitalis daily, and occasional doses of gamboge and cream of tartar. She was discharged, cured, on the twenty-fifth of May.

HISTORY VIII.

Margaret Dewrden, aged nine, was admitted, August 8, 1791. The abdomen was greatly distended, and a strong fluctuation was felt on percussion. Her urine was very scanty, her thirst great; with a white tongue, and hurried

hurried pulse, and a teizing cough. She began immediately to take a grain of digitalis every day, in an ounce of infusum gentianæ compositum. The urine increased in a day or two, and continued, for six weeks, to flow largely; her swelling decreased, and she had from two to three stools daily. She was discharged, cured, in the following December.

HISTORY IX.

Elizabeth Bailey, aged twenty-five, was one of the unfortunate persons on whom a large manufactory fell, in winter, 1791. She received a severe blow from a large piece of timber, on the left side of the chest, and was otherwise bruised, in consequence of which she was under the care of a surgeon for some time. When I admitted her on the thirtieth of May, her legs and feet were much swelled; she

she was thirsty, had a cough, and was subject to orthopnoea, particularly in the night. Her sleep was broken; she often complained of oppression and pain in her breast, and of pain about the middle of her left arm, which was always aggravated, when her breast was most uneasy. Her face, at such times was slightly œdematous. Her urine was diminished in quantity. On the third of June, she began to take one grain a-day of digitalis. Her swellings then lessened, and her urine, in general, was much increased. A violent head-ach made blisters behind the ears necessary, on the fifteenth of June; and the pain in her side and left arm became so troublesome, on the third of July, that a blister was then directed to her side. And as she complained of costiveness and flatulence, which even produced the globus hystericus, about the end of June, the stomachic or foetid pills were occasionally given

given, and a vomit was once directed. But the use of the digitalis was steadily pursued without augmentation, till the twenty-second of July, when all her symptoms were so much mitigated, that I consented to her desire of leaving the house. The swellings were completely reduced, and the pains little, if at all troublesome. I believe she has since relapsed.

HISTORY X.

John Rowbottom, aged sixteen, was admitted on the seventh of March, 1791. His complaint was of considerable duration. The belly was much enlarged, with a sensible fluctuation; the legs and feet anasaralous, and the face cedematous. His urine was deficient, his tongue white, and his thirst excessive. A florid circumscribed redness of the cheeks, accompanied him through the whole disease, and

and he complained of a cough. But his pulse was tremulous and jarring in a most extraordinary degree, and finding, on inquiry, that he had been long subject to distressing palpitations of the heart, I examined its motion with attention. On applying my hand to the usual place, I found a great expansion of the pulsation every way: the apex could be felt distinctly to strike between the eighth and ninth ribs. He now told, that the palpitations had preceded the swellings; that he had often felt pains striking across his breast; and had sometimes discharged a little blood by the mouth. He was put upon a course of digitalis, beginning with a grain a day, and two days afterwards was ordered the usual dose of gamboge and cream of tartar. This did not operate, and I found it necessary to give four grains of gamboge and half an ounce of cream of tartar, which purged him from four to six

times.

times. Half the quantity of gamboge answered afterwards. No remarkable benefit was derived from his medicines for some time. His habit was very costive, and the purgative was so often required, that the regular use of the digitalis was not begun till the middle of April. His swellings then began to give way; he took at last two grains daily. On the fifth of June, he was almost entirely emptied; and was then made an out-patient, at his own earnest request. The dilatation of the heart did not seem to proceed with much rapidity. Little difference could be perceived in it, when he left the house. On the fifteenth of September, he applied to me again, and was re-admitted. His swellings were now much greater, and his difficulty of breathing was very harrassing; the scrotum was distended to such a degree, that the penis was almost buried. His urine was again scanty. The heart now seemed more dilated,

dilated, and the pulsation felt more remote. His scrotum was immediately scarified very gently, and the following bolus was ordered to be taken at bed-time ;

R. Pulv. Scill. arid. gr. v.

— Jalap. gr. vi.

Calomel. gr. ii. Conserv. Ros. q. s. M.

On the sixteenth, his scrotum was reduced by draining, and his urine was increased. The bolus had purged him thrice. He was every way easier. On the seventeenth, the small incisions on the scrotum were healed ; but as his urine flowed still more freely, I trusted to the bolus, which had been given every night, and generally produced about two stools in twenty-four hours. His swellings then abated, and his legs and scrotum were completely emptied.*

* For the event of this case, see, *Dilatation of the Heart.*

HISTORY XI.

Ellen Wyatt, aged fifty-eight, was admitted on the fifteenth of August, 1791. Her abdomen was distended, and a fluctuation was perceptible. Her urine was scanty. She was ordered the digitalis in the usual manner, with the interposition of the pulvis purgans. She now took two grains of digitalis a-day, her urine increased, and the swelling of the belly was very sensibly lessened. On the fifteenth of September, she complained, for the first time, of swellings in her legs. She was then again ordered the pulvis purgans. On the twenty-second, the swellings of the legs were gone, but she complained of frequent sickness and lassitude, and her pulse was much slower. The digitalis was therefore omitted, and the bark electuary ordered in its stead. On the twenty-ninth, she was more swelled, and her urine was more scanty. She
was

was again ordered a dose of the pulvis purgans, and one grain of digitalis a day. She was afterwards put on a course of cream of tartar, sometimes in solution, sometimes combined with gamboge, and is now much better.

HISTORY XII.

James Lees, aged fifty-three, was admitted with ascites and anasarca, on the twelfth of September, 1791. He was ordered one grain a-day of digitalis, and as he was much emaciated, the bark was joined to it. On the nineteenth, his urine was increasing. He was then ordered two grains of digitalis daily; his urine flowed in considerable quantity, his swellings were lessened, and he was discharged, cured, on the twenty-fourth of October.

HISTORY XIII.

John Wilson, whose first attack was narrated in history the second, applied

D 2 to

to me again, on the fifteenth of June, 1790. His swellings were now as great as ever, and his countenance denoted greater anxiety. I gave the digitalis again, in such doses as to produce a strong narcotic effect, without being able to increase his urine. A variety of other diuretics, tried in succession, proved equally unsuccessful. The event of the case I do not know, for he was soon removed to the work-house.

HISTORY XIV.

William Williams, aged sixty, admitted February second, had been ill for some time. He was afflicted both with anasarca and ascites. He made very little water; his countenance was cadaverous, his pulse low; and he often complained of pain in his right side, striking upwards to the top of the right shoulder. He took the digitalis in increasing doses, without any effect,

for

for some weeks. When he took four grains a day, his pulse was rendered sensibly slower, and he became very drowsy. I therefore stopped at that quantity, and continued the same dose every day for a week longer. But the narcotic effects were so continued, that I durst go no farther. His urine was never increased by it. The sequel of this case comes under another remedy.

HISTORY XV.

Betty Williamson, aged thirty, admitted Nov. 9, 1789, was anasarcaous in her lower extremities, and there was reason to fear the approach of ascites. She had a violent cough, and a large expectoration, which had some appearance of pus. She took the digitalis as usual: it produced in a few days, violent sickness and vomiting, but did not lessen her swellings. I therefore discontinued its use.

HISTORY XVI.

Ellen Jones, aged sixty, admitted in March, 1789, was anasaralous, with the usual attendance of cough and thirst. She took the digitalis, like the rest, for a month, without any sensible difference in the state of the urine or swellings.

HISTORY XVII.

Job Bowers, aged thirty-seven, admitted Dec. 27, 1790, of a cachectic appearance, was affected with ascites and anasarca, attended with the usual symptoms. He began with a grain of digitalis, and proceeded to two grains a day, which he continued to take during a fortnight, without relief. It was then discontinued.

HISTORY XVIII.

William Waters, aged twenty-three, was admitted on the twenty-sixth of September,

September, with an incipient ascites. He took the infusum digitalis, to the extent of five or six spoonfuls a-day, by a gradual augmentation. This quantity brought on a large flow of urine, and his belly diminished. He was much emaciated, when I first saw him, and had a caries in the bones of the carpus of the right hand. In the middle of October, he was attacked with feverish symptoms, and complained of a sore throat. On inspection, a dark-coloured inflammation appeared in the fauces. He was ordered bark, and astringent gargles, and soon got better; but he looked extremely ill, his belly filled again, and his lower extremities became anasarcaous. The digitalis was now repeated, and a tonic course joined with it. His urine again flowed largely, but the swellings were not lessened. In the beginning of November he was attacked by a sudden pain in his bowels, on which the former course was

D 4 suspended,

suspended, and opiates were given. The pain went off in the course of the day, and the swellings disappeared. But a few days afterwards, his right thigh became erysipelatous, and in spite of the liberal use of bark and wine, the affection extended to the groin, and ended his existence on the eleventh of November. I could not obtain leave to inspect the body.

HISTORY XIX.

Mary Rowley, aged thirty, admitted February 12, 1791, had the usual signs of ascites. She took two grains a-day of digitalis for near a fortnight. She grew worse, and the remedy was dropped.

HISTORY XX.

Mary Sudwoth, aged twenty-one, admitted March 14, with evident symptoms

toms of ascites and anasarca, took two grains of digitalis a-day, for a week, but became worse, and the course was changed.

HISTORY XXI.

Elizabeth Oldham, aged forty-eight, admitted June 20, 1791, with ascites, took the digitalis with the pulvis purgans, in the manner already described. She found no relief, and in a month the remedy was discontinued.

HISTORY XXII.

Elizabeth Williamson, aged sixty, admitted July 11, 1791, ill of ascites, was ordered the digitalis and pulvis purgans as usual. She took them for a fortnight, but without benefit.

HISTORY XXIII.

George Newton, aged seventy, admitted January 24, 1791, with ascites
and

and anasarca, took the digitalis as usual. His urine did not increase; but symptoms of gangrene appeared in the lower extremities, and he died on the thirtieth of the same month. On dissection, the abdomen was found full of water; the liver appeared soft and pale; the pleura, on the surface of the lungs, bore marks of inflammation, and adhesions were formed to the parietes of the cavity: there was a considerable quantity of water in the thorax.

HISTORY XXIV.

William Taylor, aged nineteen, admitted May 30, 1791, with ascites and anasarca, was so much loaded with water, as to be in constant danger of suffocation. He was put on a course of the pulvis purgans and digitalis, but without effect. The accumulation increased; his cheeks and lips became
livid;

livid; and it was necessary to tap him, to prevent instant death. Accordingly the operation was performed on the third of June, and a very large quantity of water drawn off. He appeared somewhat easier the next day, but languid. He began to fill again; mortification took place in the scrotum, which was greatly distended; and he died on the seventh of June.

I have no notes of the dissection, but I recollect that the liver and kidneys were greatly diseased. The chest was full of water. A singular circumstance attended the operation, of which I have prevailed on Mr. Simmons, the operator, to draw up an account. It follows, in his own words,

“I tapped William Taylor for an
 “ascites, at the request of Dr. Ferriar,
 “in the usual part of the abdomen;
 “carefully examining the part where
 “the

“the trocar was to be introduced,
“to avoid wounding any considerable
“blood-vessel. A large quantity of
“watery fluid was evacuated, and to-
“wards the conclusion of the discharge
“it was tinged of a reddish colour.
“On withdrawing the canula, I was
“much alarmed with the appearance
“of a considerable flow of blood,
“expecting no less than the immediate
“death of my patient, from his very
“debilitated state previous to the opera-
“tion. The colour, however, resem-
“bled that of venous blood, and I
“found the effusion was stopped by com-
“pression. Styptic applications were
“therefore made, and the compression
“was continued for some time, which
“had the desired effect. *How does it*

“On inspecting the body after
“death, which happened in a few
“days, I had the satisfaction to find,
“that not the smallest quantity of
“blood

“ blood had been poured out into the
 “ cavity of the abdomen ; and that
 “ neither inflammation nor gangrene
 “ had come upon the wound from the
 “ use of the astringent application.
 “ The cause of the hæmorrhage was
 “ now apparent. The epigastric artery
 “ with its accompanying vein running
 “ out of their usual course, the latter
 “ had been divided, and so near to the
 “ former, that there was not more
 “ than the space of a line between the
 “ wound made by the trocar and the
 “ coats of the artery.

“ This case has induced me to think
 “ the operation of the paracentesis of
 “ the abdomen not so trifling as it is
 “ generally believed to be ; and the
 “ late observations on this subject by
 “ Dr. Smith and Mr. Ford, contained
 “ in the second volume of the Medical
 “ Communications, corroborate opinions
 “ I had formed previous to my seeing
 “ that publication.

“ Chirurgical

“ Chirurgical writers have differed
 “ considerably in their opinions of the
 “ proper part for making the puncture
 “ in cases of ascites. Celsus recom-
 “ mends the water to be evacuated
 “ at the navel, or nearly four fingers
 “ breadth below it, inclining to the
 “ left side, and when performed in the
 “ latter manner, he advises it to be done
 “ with circumspection, lest a blood-
 “ vessel should be opened.

“ Succeeding writers deviated from
 “ this ancient practice, and made the
 “ puncture, when below the navel,
 “ either on the right or left side, and
 “ at the distance of the breadth of
 “ three or four fingers ; and, sometimes,
 “ at the same distance immediately be-
 “ low the navel. Deviations from these
 “ modes of practice have been intro-
 “ duced by the more modern surgeons ;
 “ for some, apprehending the ancient
 “ practice to be laid down without
 “ attention

“ attention to the distended state of the
 “ cavity of the abdomen, recommend
 “ it to be done at the distance of seven
 “ or eight fingers breadth, descending
 “ obliquely from the navel, which they
 “ say will not be more than equal to
 “ four when the belly is returned to its
 “ natural state. This seems to agree
 “ with the directions given by chirur-
 “ gical writers of the present day, who
 “ order the opening to be made midway
 “ between the spine of the ileum and
 “ the umbilicus.

“ As the present mode of practice is
 “ liable to such serious consequences,
 “ and is recommended early in the
 “ disease, not only to relieve present
 “ distress, but with a view to aid the
 “ power of internal remedies, it becomes
 “ of importance to the art of surgery,
 “ if possible, to amend it.

“ The

“ The fluid has been evacuated at
 “ the navel, only when there has been
 “ a particular swelling there, and an
 “ evident fluctuation under the thin
 “ integuments.

“ It has been performed at the dis-
 “ tance of four fingers breadth from
 “ the navel, on the right or left side,
 “ as circumstances indicated, to avoid
 “ the recti muscles; but in the dis-
 “ tended state of the abdomen it would
 “ nearly get into them, and, there-
 “ fore, do just the reverse of what
 “ was intended. From particular opi-
 “ nions respecting the disease, it was
 “ proposed by Albucasis, Avicenna
 “ and others to make the opening at
 “ the same distance directly below the
 “ navel; but this was afterwards dis-
 “ carded from physiological opinions
 “ respecting the nature of tendons.
 “ From the most attentive considera-
 “ tion I am able to give the subject,
 “ I am

" I am, notwithstanding, of opinion
 " that this is the part in which it
 " ought to be performed. In this way
 " common integument, tendinous ex-
 " pansion, and the peritoneum only,
 " are, in all probability, divided; and
 " in the present mode, if rightly per-
 " formed, I think also no other parts
 " are divided, for I agree with Le
 " Dran that the middle space between
 " the navel and the crista of the os
 " ileum which is exactly between the
 " fleshy part of the oblique and trans-
 " verse muscles, or what we call the
 " linea semilunaris, ought to be the part
 " perforated.

" In the case related, the puncture
 " was made in this part, upon the edge
 " of the above-mentioned muscles.

" The epigastric artery comes off
 " anteriorly from the external iliac,
 " and running obliquely upwards,
 E " reaches

symptom for three months, but the original disease then returned, and proved fatal.*

I have seen a patient, who had long been in a brutal state of insanity, seized with a pleurisy, and have found him more clear and consistent in his answers than usual. But I have known another maniacal patient, not so completely deranged, undergo a very painful operation, without any immediate effect upon the mind.

In one maniacal case, which succeeded an ill-treated typhus, the patient received no relief from medicines, till a broad, yellow, scurfy eruption appeared about the crown of his head, which was bald. Successive crops of these eruptions delivered him completely from all remains of his mental disorder.

Typhus, and the cynanche maligna are sometimes reciprocally converted, when both are epidemical. The cynanche has been

* Mead de Insania.

converted

converted to general dropsy, even before the ulcerations in the fauces disappeared.

IV. Conversions may arise, when a disease, regular in its usual course, or long familiar to the habit, is violently terminated by improper methods, or suddenly extinguished by accidental circumstances.

I have noticed elsewhere,* a remarkable case, in which epileptic fits were produced by the retrocession of the itch, in consequence of some external application. In that case, the epilepsy resisted all the usual methods, and was only cured by reproducing the itch.

Instances of the production of melancholy and madness, by the suppression of eruptions, or the healing of old ulcers, and habitual drains, are common in practical writers. The diseases originating from the suppression of the menstrual and hæmorrhoidal discharges, are also well explained in different books.

* Med. Hist. and Reflect. p. 183, 184.

“danger of injury from the instrument.”

CREAM OF TARTAR.

I have always directed this remedy to be given in Dr. Home's method: from half an ounce, dissolved in ten ounces of water, to an ounce, or an ounce and a half daily.

HISTORY XXV.

Mr. C. about forty years of age, consulted me for a complaint in his breast. He was sensible of constant weight and oppression; he slept ill, and frequently awaked in terror; he had a slight cough; his breathing always became difficult, when he walked up an ascent; his urine was scanty; and he had, at times, a pain about the middle of the left arm. His legs were slightly

slightly anasarcaous; his face was cedematous, and his countenance anxious. He was thirsty, and had a frequent, irregular pulse. I ordered him the cream of tartar, to be taken next morning. I saw him in the afternoon of the next day, and found that his urine had increased from about half a pint in the day, to a pint and half. He staid in town a day or two longer, that I might observe the effect of the medicine, and finding his urine flow more and more freely, he returned to the country, with a resolution to try the plan with perseverance. He had used a variety of medicines before, without any advantage. I heard from him often, and for several months received accounts of a gradual amendment. His urine, for some time, came off in greater quantity than natural; afterwards it returned to its usual state. All his uneasy symptoms disappeared, and, as he wrote me, after being un-

able to creep above a mile, he could now walk three or four miles, over any kind of ground, without inconvenience. This agreeable change continued for near twelve months, but at the end of that time, his symptoms returned. He had recourse again to his cream of tartar, but I do not know with what immediate effect. I heard of his death soon after.

HISTORY XXVI.

A poor woman, who had become dropsical and asthmatic by hard labour and ill usage, applied to me in 1788. I have no notes of the case, but I remember that she took the cream of tartar, and that her swellings were, for the time, entirely removed.

HISTORY XXVII.

Peter Nield, aged forty-five, admitted November 11, 1789, was anasarcaous.

He

He took the cream of tartar, and soon began to void a large quantity of urine, and to perceive a decrease of the swellings. As the medicine operated much by stool, however, he became very feeble, and I found it necessary to support him liberally, at the same time, with tonics. He was discharged, cured, in a few weeks.

HISTORY XXVIII.

Thomas Mather, aged twenty-five, was affected with erysipelas and swelling of both legs, in October, 1791. When the eruption went off, he began to swell generally. At the commencement of my attendance, November eighteenth, his legs were excessively distended, his belly was very large, and his face œdematous. He had taken some purges of jallap with mercury, and felt somewhat easier, but his swellings were increasing. I ordered him the

Y 4072111

E 4

cream

cream of tartar. Next day, he had several watery stools, and his belly was less. On the twenty-second he continued to have four or five watery stools a-day, he passed more urine, and his belly was fallen in circumference several inches. He now walked about with ease and alacrity. On the twenty-seventh, he had only one or two stools in the day, and made but little water, yet his swellings continued to decrease. The cream of tartar was therefore increased to six drachms a-day. It seldom produced above two stools a-day; his swellings went entirely off, and he was able to go to work again on the thirteenth of December.

He relapsed from imprudence, and came under my care again in the course of a few weeks. He recovered by a repetition of his medicine.

HISTORY XXIX.

Catherine Duny, aged twenty, admitted about the beginning of January, 1790, had ascites; and towards evening, had some degree of swelling in her ancles. She was put on a course of cream of tartar, and was discharged, cured, in three weeks.

HISTORY XXX.

Ann Wagstaff, aged twenty-five, anasarcaous, admitted January 25, 1790, took the cream of tartar, and was dismissed, cured: my notes do not shew at what time.

HISTORY XXXI.

John Hopwood, aged forty-eight, had been subject for several years to severe pain in the head, and occasionally to giddiness. About a year before he

he consulted me, he began to complain of a dry cough, which increased till the beginning of winter, 1791, when I saw him. His legs were then much swelled, and pitted on pressure; his abdomen was considerably enlarged, with a considerable degree of fluctuation; his urine was scanty, he complained of thirst, and had a very troublesome orthopnæa. I put him on the use of cream of tartar. In three days, he made half a pint of urine more in the day, and his swellings decreased, At the end of a fortnight, the swellings were nearly gone, the cough and orthopnæa greatly relieved, and every appearance promised a cure. But the pain in his head, which had been easier for some time, suddenly returned, and he became blind, At the same time, his extremities were affected with a degree of paralysis. He was now so much discouraged, that he refused to take any more medicines, and sunk by
degrees

degrees till he expired, with a livid countenance, and every mark of an oppressed brain. I could not obtain permission to inspect the body.

HISTORY XXXII.

Elizabeth Monk, aged forty-five, had a dry, vexatious cough for above three years. She had so great a degree of orthopnæa, that she was commonly unable to lie down in bed; her urine was scanty; her face often swelled, and at such times her cough and difficulty of breathing were most troublesome. She often felt an uneasy tingling in her left arm and hand. There was a strong expression of anxiety in her countenance. I ordered her the cream of tartar, which produced four or five loose, watery stools a-day, and an almost immediate increase of urine. Her symptoms were gradually relieved, and at the end of a month,
she

she is free from every complaint, excepting some degree of cough.

HISTORY XXXIII.

Jeremiah Wood, aged forty-two, admitted April eighteenth, anasaralous, took cream of tartar without any sensible advantage. He died on the twenty-sixth of the same month.

On dissection, the chest was found full of water, the lungs adhered strongly to the left side of the thorax, and the pericardium was firmly united to the heart.

BACHER'S TONIC PILLS.

I believe practitioners in this country have had little experience of this remedy. Dr. Cullen says, in his *Materia*

teria Medica, that he had never heard of any person who thought well enough of the formula to use it. Prejudice, however, is never to be encouraged: in the scarcity of good diuretics I have been induced to employ this highly recommended formula, and have found no reason to think lightly of it.

HISTORY XXXIV.

William Williams (see History XIII.) after discontinuing the digitalis, began to take nine of the tonic pills daily. They produced an immediate flow of urine, and several watery stools every day. His belly diminished considerably in size, but his legs, during the course of digitalis, had become so much distended, that a rupture of the skin took place in each, and the water drained away in great quantities. He now emptied a-pace, but grew weaker from

from day to day. The pills were continued, but a quantity of wine and of tincture of bark was allowed, sufficient to support his pulse, and the pills were managed so as to prevent any considerable purging. The openings in his legs preserved a healthy inflammation round their edges; but no art could relieve the languor occasioned by withdrawing the pressure of the water; and he died as soon as he was nearly freed from the swellings.

HISTORY XXXV.

Sarah Hartley, aged twenty-nine, came under my care, after she had been during three months the patient of another physician. She was affected with ascites and anasarca; her urine was scanty; and her countenance was livid. She took six of the tonic pills daily; they produced an increase of
urine,

urine, and in three weeks occasioned a considerable diminution of the swellings. But she became languid, her strength seemed to decay with the disease, and on December second, she was seized with a looseness, at the approach of which the pills were laid aside. Astringents and opiates were now employed, but to little purpose. The Diarrhæa was attended with a fixed pain in the bowels. She sunk gradually, and died December 6, 1790.

On dissection, some turns of the ileus were found affected with a dark red inflammation. The liver was soft and pale; the kidneys were enlarged, and suppurations appeared in the pelvis of each. There was water in the chest, and adhesions were formed between the pleura and the surface of the lungs.

HISTORY XXXVI.

Alice Wrigley, aged fifteen, was admitted, May ninth, with anasarca, and an incipient ascites. She took three of the tonic pills thrice a-day. They increased her urine to a considerable quantity; the swellings abated, and she was discharged, cured, on the sixteenth of the following October. Her attendance had been irregular.

HISTORY XXXVII.

Anne Waring, aged twenty-three, had ascites and anasarca. She took fifteen of the tonic pills every day, which produced a great increase of her urine, and she was discharged, cured, in four months. She had been very irregular in taking the medicine, and once absented herself from attendance, and

and relinquished the use of the pills, for three weeks together.

HISTORY XXXVIII.

Betty Clay, aged forty-six, had ascites. Her urine was very scanty. She took for eight months, thirty-five drops of spiritus ætheris nitrosi, thrice a-day, with the effect of an increase in the quantity of urine, and a slow abatement of the swelling. But this effect at length ceased, and her legs began to swell. I then ordered the tonic pills. When she began to take fifteen a-day, her urine again flowed largely, and the swellings were reduced. She then took twenty pills daily, with a farther abatement of the symptoms. At present, the swelling of the abdomen is nearly gone, and her only remaining complaint is a troublesome cough.

HISTORY XXXIX.

Job Bowers (History XVIII.) took the tonic pills, for some time after the digitalis was given up, but without relief.

HISTORY XL.

Mary Winterbottom, aged fifty-eight, admitted August 15, 1791, with ascites, began to take twenty of the tonic pills every day. The effects were a considerable increase of urine, and many watery stools. She diminished in size very regularly, and was discharged, completely cured, on the eighteenth of October.

PULVIS DOVERI.

This remedy has been used with success in dropsical cases, by Dr. Hamilton

milton of Edinburgh; some instances of which I saw, during my attendance on him at the Infirmary of that city.

HISTORY XLI.

William Kay, aged twelve, admitted November 9, 1789, had become anasarca in consequence of exposure to cold. He was ordered to use the pediluvium, and afterwards to take a scruple of Dover's powder. The first dose did not succeed, owing to some mismanagement of the patient. A second dose was given, which sweated him profusely, and reduced his swellings. He was then directed to take the bark, and was discharged, cured, in less than a week.

GAMBOGE WITH CREAM OF TARTAR.

HISTORY XLII.

Job Bowers (History XVIII. and XXXIX.) when oppressed with ex-
F 2 treme

treme difficulty of breathing, took from one to two grains of gamboge, with half an ounce of cream of tartar, every two or three days. It always produced from four to six watery stools, lowered his swellings, and relieved his breathing. Whenever the exhibition of his purgative was delayed beyond the usual time, all his symptoms were greatly aggravated. At length, however, his urine was totally suppressed, which was soon followed by death. I did not obtain permission to open the body.

GAMBOGE WITH MERCURY.

HISTORY XLIII.

Hannah Wolstenholme, anasarcaous, took six grains of calomel, with one grain of gamboge, twice or thrice a-week, according to the degree of evacuation

evacuation produced. It increased the quantity of urine immediately, and she was completely well in a fortnight.

CALOMEL WITH SQUILLS.

HISTORY XLIV.

Thomas Jelly, aged thirty-eight, was admitted August 15, 1791. The abdomen was greatly distended, with evident fluctuation, and his lower extremities were anasarcaous. He passed very little urine; had a constant difficulty of breathing, dry cough, and a tormenting thirst. He took some of the common diuretics,* without relief, till the twentieth. He was then ordered the pulvis purgans, which gave him some motions, but did not increase

* P. Digitalis among the rest.

his urine. On the twenty-second he was ordered the following bolus :

R. Sapon. Hispan. ℥i.

Pulv. Scill. Arid. gr. x.

Calomelan. gr. iij.

Opii gr. j.

Conserv. Ros. q. s. Misce.

This increased his urine immediately, and purged him gently. Between the twenty-third and twenty-eighth, he sometimes passed upwards of three quarts of water in twenty-four hours. At the latter period, the purgative effect was so far lost, that it was necessary to order him the pulvis purgans. His mouth now became affected, and on the thirty-first, at which time he had taken exactly twenty-one grains of calomel, his gums and the inside of the mouth were ulcerated, and a spitting came on. He was then much reduced in size. On the thirty-first his bolus was repeated, without the calomel. While the ptyalism lasted,
his

his water came off freely, but when his mouth began to heal, the quantity decreased, and the swellings returned. At this period his appetite was voracious to such a degree, as to make him uneasy in his mind. He spoke of it several times with anxiety. On the eighth of September, his mouth was well, and he was nearly as bulky as ever. The calomel was therefore again added to the bolus; he was allowed porter, and put upon full diet. On the sixteenth he had taken seven boluses, containing exactly twenty-one grains of calomel. He had always been purged at least three times a-day by the bolus, and had parted with great quantities of water. His mouth was now very sore, again: the bolus was therefore omitted; and in two days, a considerable degree of salivation took place. But the swellings of his legs were completely removed, and his belly was reduced very nearly

to its natural size. On the twenty-third his mouth was still extremely sore, and as the weather became cool, he was ordered the electuarius e sulphure. On the twenty-seventh, his mouth was somewhat easier, but he still spit much, and was very weak. He was then allowed four ounces of wine a-day, in addition to his porter.

On the thirtieth, he was seized with a violent looseness, the spitting decreased, and his belly enlarged again. The urine was now much less in quantity. He was ordered astringents with laudanum. The next day, his purging was stopt, and the abdomen so far returned to a natural state, that though it appeared full, he could retract it as completely as a man in health usually does. His mouth was perfectly well in a few days, but he continued weak. In the first week of October, he was seized with a violent cough,
and

and complained of universal pains. The looseness returned, and his belly increased again in size. On the tenth, he was so much altered that it was evident death was approaching. He complained that his stomach would retain nothing; his pulse became low, and faltering, and he had frequent cold sweats. On the eleventh, he was insensible, and seemed to be dying, but he lingered in that state, till the morning of the thirteenth, and then expired.

The body was opened next day. A quantity of water was found in the cavity of the chest, chiefly, on the right side. The right lobe of the lungs adhered strongly to the pleura, and there were marks of inflammation on its surface. There was an adhesion also on the left side. The pericardium contained a good deal of water, and adhered to the forepart of the right ventricle; the heart was larger than natural.

A great

A great quantity of clear, brown-coloured water was found in the abdomen. The liver was enlarged, hardened, and disposed to scirrhusity. The pancreas was indurated, and altered in its texture. The stomach was uncommonly small, and the blood-vessels on both curvatures were much distended; near the cardia, it was eroded by the gastric juice. The omentum was preternaturally red. Several turns of the ileus appeared discoloured, and on opening them, the villous coat was found greatly inflamed. This inflammation was traced into the transverse arch of the colon. The spleen was sound: the left kidney was larger than natural, but otherwise sound. The right kidney was in a natural state.

NICOTIANA.

NICOTIANA.

HISTORY XLV.

Mary Coxe, aged twenty-nine, complained of pain and swelling on the left side of the abdomen; of thirst, and scarcity of urine. On examination, a large tumor on that side appeared, extending from the spine of the os ileon, almost to the ossa pubis. The edges were well defined, but the surface, though unequal, was yielding, in some degree, and gave the impression of a contained fluid. Before I saw her, she was ordered from twenty-five to thirty drops of the infusum nicotianæ twice or thrice a-day, with a purgative electuary, composed of gamboge, jallap and cream of tartar. This increased the quantity of urine, but produced no effect on the swelling. I ordered
a drachm

a drachm of the unguentum cæruleum to be rubbed into the groin and thigh on the side affected, every other night, and twenty-five drops of spiritus ætheris vitriolici to be taken, four times a-day, omitting the former medicines. In the course of four or five days, there was a sensible abatement of the swelling, and her urine continued to flow freely. The spiritus ætheris vitriolici happened to be omitted, for some reason, and she found herself worse. It was then repeated, and again relieved her. She was much better, when she left Manchester, with the regiment to which her husband belonged.

HISTORY XLVI.

Job Bowers (History XVIII. and XXIX.) took the infusum nicotianæ, after omitting the tonic pills, for several days, in such quantities as to
produce

produce violent sickness, without any diuretic effect.

HISTORY XLVII.

James Johnson, aged twenty-three, admitted August 15, 1791, excessively distended with ascites and anasarca, after trying some other diuretics, took the infusum nicotianæ in the quantity of eighty drops in twenty-four hours, for three days together. It produced sickness, but no increase of urine. Fifteen grains of jallap, and two drachms of cream of tartar, given at bed-time, vomited him briskly, and reduced the swellings for a time. But no increase in the quantity of his urine could be produced, by the most powerful diuretics, given in large doses, till the end of September, when he took, after a gradual augmentation, one hundred and twenty of the tonic pills in one day. His legs had previously begun to discharge, but without diminishing

diminishing the size of his belly. Though he passed more urine, while he took largely of the tonic pills, yet the quantity was not uncommon; more water seemed to be discharged by stool, than by the urinary passages. On the ninth of October, his abdomen was considerably reduced, but a considerable degree of vertigo had succeeded the last dose of the tonic pills; they were therefore omitted, and some wine prescribed. Thirty drops of spiritus ætheris vitriolici were likewise ordered to be given four times a-day. On the tenth, pain in the bowels and a diarrhœa came on; and the vitriolic spirit was omitted. Opiates and astringents were now given, but with little success. The purging continued violent, till the twenty-sixth. It then went off, leaving him greatly exhausted, but nearly free from anasarca, and much lessened in the size of the abdomen. The cerevisia diuretica was
ordered

ordered on the twenty-eighth, joined with a cordial and tonic course, and full diet. But as his urine again decreased, and he began to fill afresh, on the fifth of November, he was ordered three grains of digitalis, which, on the seventh, were augmented to four. Time was not allowed, however, to experience the effect of this course, for he was desirous of returning to his native air, and I dismissed him, much relieved, but with little prospect of being ultimately cured.

This is the only case, in which I found the tonic pills affect the head; but there seemed a peculiar insensibility in this man's constitution to the stimulus of diuretics, and it was necessary to exhibit them in very strong doses.

HISTORY XLVIII.

Mary Rules, aged one year and a half, had the abdomen distended with
water,

water, to an excessive degree. I ordered a laxative, to obviate costiveness, and a few days afterwards she was tapped. A great quantity of water was drawn off, and the child appeared easier. Next day, however, she died.

On opening the body, we found the intestines much inflated; the liver was enlarged; but the principal disease appeared in the kidneys. They were increased in size; the pelvis of each had undergone an active inflammation, and several of the tubuli were full of pus.

HISTORY XLIX.

Charles Allen, of the same age, died of ascites about the same time, but the body was not inspected.

HISTORY L.

Mary Beard, aged thirty-eight, was admitted August 15, 1791. She had laboured

laboured under ascites and anasarca during several months, and was now enormously swelled, so that she breathed with extreme difficulty. She took some doses of digitalis, but as they produced no increase of urine, I ordered her to be tapped, a few days after her admission. Accordingly, the operation was performed, and eighteen quarts of water were drawn off. She was relieved in breathing, but a great degree of debility took place, and she died at the end of two days. When the body was opened, the liver appeared of a firmer texture than ordinary, inclining to schirrosity; the kidneys were enlarged, particularly that on the left side; and pus was found in the pelvis of each. In the thorax, the surface of the lungs was much diseased, and purulent; and water was effused in the cavity.

Of forty-seven cases, which I have here presented, under a short view,

G twenty-

twenty-two patients have been cured,
 three are in a state of convalescence,
 and will probably soon be discharged;
 five have been relieved; seven have
 received no benefit from their first
 course with me, and have passed into
 a different class of patients; and ten
 have died. Several of the last were in
 a hopeless state, when I first saw them;
 particularly Taylor, Rules, and Beard.*
 Most of them were also affected with
 hydrothorax. The success of the dif-
 ferent methods employed has therefore
 been tolerably good, in a disease so
 difficult of removal as dropsy. "There
 "is no disease," says Dr. Home, which
 "affords hospitals more numerous pa-
 "tients than the different species of
 "hydrops, and none, of which fewer
 "are cured. The incurable nature of
 "hydropic affections, was of old re-
 "marked by Aretæus: *Ab ipso pauci*

* Hist. XXIV. XLVIII. and L.

"*liberantur,*

*“ liberantur, idque felicitate, ac deorum
“ potius quam artis auxilio.”**

It remains to compare the merits of the three principal remedies employed, digitalis, cream of tartar, and the tonic pills.

1. Of twenty-four patients, who took digitalis, nine were cured; two were relieved; four died, and nine were not relieved. Of these cases, two were anasarca; seven were instances of ascites, two of hydrothorax; the rest were complicated, and in almost all the fatal instances, there was water in the chest. I have given this medicine in some other cases, where it did not succeed; but as the patients were in a dying state when I was called to them, it would be unfair to insert them.

* Clinical Exper. and Histories, p. 326.

Yet it must be observed, that in some of the instances I have given, which terminated fatally, notwithstanding the use of digitalis, the patients appeared to be in that state, which Dr. Withering describes as most favourable to the action of that medicine. Hartley, Williams and Newton were examples of this.

Respecting the particular operation of digitalis, in those cases, it may be remarked :

a That where it proved successful, it gave relief early, and in small doses; this appears from the first eight cases, and from that of Lees.

b That when given in such quantities as to excite nausea, or to produce evident narcotic effects, it does not operate as a diuretic. Johnson took it in such doses as to make him very sick, and

and Williams continued it to four grains a-day, till his head and pulse were considerably affected, without passing a drop more of water. These facts correspond with Dr. Withering's experience, so that it is needless to dwell upon them.* I have had such repeated conviction of the first observation, that, if digitalis does not answer within the first week, I exchange it for some other diuretic, or interpose a cathartic, composed of gamboge and cream of tartar. I was led to the latter expedient, by observing, in Williams's case, and another in private practice, that the narcotic effect of the digitalis, in a long use of it, seemed to preclude its action as a diuretic. The same consideration had occurred to Dr.

* Dr. Withering observes (p. 185.) that a diarrhæa, supervening on the use of foxglove, stopped its diuretic effects. It has been asserted, that a purging always impedes the flow of urine, in dropsies, however excited. V. Wilkes on the Dropsy, p. 213.

Stokes.* Gamboge was long celebrated for its hydragogue powers, but appears to have fallen into disgrace by the indiscretion with which it was exhibited. Some of the older writers talk of giving sixteen grains for a dose.† I have found it very safe and manageable in small quantities; sometimes four grains have been necessary to operate four or five times, in a young subject. In conjunction with cream of tartar, it forms a powerful diuretic, and according to circumstances, may be made either to assist, or take the lead of the digitalis. I believe, that by this combination of the remedies, a flow of urine may very generally be commanded.

* Dr. Withering's Account of the Foxglove, p. 150.

† Wilkes on the Dropsy. Art. *Purges*. Sydenham orders fifteen grains of gamboge, in a draught, in the *Processus Integri*, as a very gentle cathartic.

c When

c When digitalis fails, other diuretics will often succeed. This appears, from the cases of Williams, Jelly, Bowers, Johnson, and several of the rest.

d When digitalis does provoke an increase of urine, the swellings are not always proportionably relieved. While Waters was passing a great quantity of urine, and taking six spoonfuls a-day of the infusum digitalis, the swellings of his legs did not diminish. And while Rowbottom's legs were emptied, a short time before his death, the collection of water in the pericardium appeared to be increased.

2. Of ten cases, in which cream of tartar alone was given, according to Dr. Home's method, six were cured, two died, and two are convalescent. Of these, one was a distinct case of hydrothorax in which all the symp-

toms were removed, and the patient continued well nearly for twelve months. In another, there was strong reason to suspect the presence of water in the chest; there also the symptoms were entirely taken off. In one fatal case, the existence of hydrothorax was ascertained. Two others were cases of anasarca, one of ascites, another of anasarca and ascites combined.

I have to observe, of the peculiar action of cream of tartar :

a That in my successful cases, it operated very early; generally producing an increased flow of urine within twenty-four hours. This was especially remarkable, in Mr. C. and Mather. Dr. Home often found its salutary effects delayed to the end of three or four weeks.* But it is difficult to persuade patients to continue

* Clinical Observations, Exper. &c. Art. Remedies of Hydrops.

the use of a medicine so long,* without any sensible benefit.

b I have commonly found it purge the patient four or five times a-day. Instead of increasing the dose, therefore, as Dr. Home directs, I have been obliged to order tonics and cordials, to enable the patient to bear the usual quantity. There is, indeed, great difference between the constitutions of the usual patients at the Edinburgh royal infirmary, and those on which we have to work here. The natives of Manchester generally bear evacuations very ill. But after patients have continued to use this remedy for some weeks, I have found it necessary

* I have often found patients object to the quantity of liquid, in giving the solution of cream of tartar. This has obliged me in several cases, to have recourse to the combination with gamboge, which may be exhibited in a very small portion of fluid.

to increase the dose to six drachms, an ounce, or more, every day; and have then found it produce only two stools in twenty-four hours. In such cases, its diuretic power seemed to lessen in equal proportion. After Wyatt had long taken an ounce of cream of tartar a-day, she even became costive with that dose, and required the use of gamboge. Several of my dropsical patients, however, were strangers: Nield, Mather, Duny, Jelly and Johnson were Irish.

c Cream of tartar commonly diminishes the swellings very speedily. It produces very watery stools, and for the greater part, lessens the patient's size more quickly than the increase of urine would lead us to expect.

3. Of eight cases, in which the melampodium was exhibited, three were completely cured, one is convalescent; two

two were emptied, and their swellings quite reduced, but died, from circumstances to be explained hereafter. One was not relieved. Another, Johnson, had watery stools, and was reduced in the size of the abdomen, after digitalis, and many other powerful diuretics had failed. In two of these, there was water in the chest, and probably in Johnson. Two were cases of pure ascites, one cured, and the other convalescent. The rest were complicated.

a The tonic pills, when they have succeeded with me, have operated early, by producing copious watery stools.

b Their action is easy, but in cases of long standing, contrary to Mr. Bacher's assertion, they evidently weaken the patient, however cautiously given,

c Whenever they produce a discharge of water, they reduce the swellings.

ings. These two effects, as I shall soon have occasion to observe, are by no means reciprocal in the use of every diuretic.

The Pulvis Doveri was given only in one case. The occasional cause of the disorder led directly to the employment of sudorifics, in that instance.

Gamboge with cream of tartar gave relief in a case (Bowers's) which had baffled every other prescription. The patient was cachectic, and there was reason to believe that the viscera were obstructed. The same remedy, in conjunction with calomel, was given, in a case of anasarca, and effected a cure very speedily.

The combination of calomel with squills was pushed to a considerable extent, with Jelly, because I suspected the condition of the liver. It did not, however,

however, diminish the swellings in proportion to its diuretic effect.

The tobacco tincture proved a ready diuretic with Coxe. In the two other cases, and in some which I do not recollect with sufficient accuracy to insert, it did no service. But in Coxe's case, which was evidently a dropsy of the ovarium, no benefit could be expected from simple diuretics. The mercurial friction, and spiritus ætheris vitriolici, produced a considerable effect on the disease. The latter, as well as the spiritus ætheris nitrosi, probably increases the urine by the action of its alcohol.

In Betty Clay's case, we have a striking example of the little anti-hydropic power of an active diuretic, the spiritus ætheris nitrosi. She attended me only once in two or three months, and at the end of eight, was as much swelled

as

as ever; though she had been constantly using this medicine, and though her urine was passing in very unusual quantity. The tonic pills have nearly effected a cure in this case.

On reviewing these observations, which were made without choice, and with no predilection for any remedy, the result appears not highly in favour of the digitalis. Yet I esteem it a valuable medicine, and I have always found it safe, by attending to Dr. Withering's cautions. The melampodium, as given in the form of tonic pills, appears, likewise, to possess virtues that ought not to be neglected. I have employed the cream of tartar in comparatively few cases, but when their nature is considered, and the surprizing proportion of success allowed for, I think we may fairly rank this medicine in the first

first class of hydragogues. From what I have seen of its effects, I shall hereafter give it a preference in most cases of dropsy, to bring forward a larger testimonial of its real merits. Stronger conclusions may be drawn in its favour, from these cases, because they coincide with the experience of Dr. Home.* Indeed, if cream of tartar be found to possess only an equal share of merit with digitalis, the former will deserve the preference, as possessing no deleterious qualities and being easily managed by practitioners of the smallest judgment. In treating of this remedy, Dr. Home has formed a just and valuable distinction, between remedies which act chiefly as diuretics, and those, which at the same time, diminish the fluid effused in dropsies. I have been led to refer to this distinction more than once, in the preceding cases. The doctor's words are these;

* Clinical Observ. Exper. &c, p. 349,

“ We

“ We have found, that oxymel col-
 “ chici, baccæ juniperi, &c. are much
 “ stronger diuretics, but much weaker
 “ antihydropsics, than cremor tartari.
 “ We have seen, that it often neither
 “ increases urine nor stool, and yet
 “ that it cures.”* If this difference
 were more observed, some mortifying
 disappointments in practice might be
 avoided.

Twenty-one of my patients were
 males, and twenty-six were females.
 This proportion supports the common
 opinion, that women are more sub-
 ject to hydropic affections. Their ages
 have varied from a year and a half to
 seventy.

In those cases which terminated
 fatally, where an inspection of the body

* Clinical Exper. Obs. &c. p. 353. The whole passage, which
 is long, deserves particular attention.

was obtained, besides the appearances of disease in the viscera, usual in dropsical complaints, we have frequently seen the kidneys affected with enlargement, inflammation, and a degree of suppuration. In Rowbottom, besides the disease in the liver, there was an affection of the heart, sufficient alone to produce death. In such instances, dissections prove the impossibility of saving the patient. Yet in several of these cases, much relief was obtained by the use of medicines, and life was not only prolonged, but soothed. The power of an hydragogue never appears greater, to a judicious observer, than when it reduces swellings occasioned by permanent disease in the viscera, although the event of the case should be ultimately fatal.

Five of my patients died, in consequence of a diarrhæa, which began

H when

when their swellings were greatly reduced. It is an observation of Hippocrates, repeated by all writers* on this disease, that a diarrhæa, appearing in a dropsy of long continuance, is generally fatal. Johnson, however, had a looseness, almost at the distance of three months from the time of his admission, and yet escaped. In three of the dissections, an evident cause of this symptom appeared: the intestines were in a state of great inflammation.

Such a state of the bowels is frequently mentioned by practical writers,† but not as connected with a diarrhæa, nor as following the abatement of the swellings. I am inclined to believe, that this is a peculiar termination of inveterate ascites. We see

* Hoffman, tom. III. p. 329. Sydenham sub titulo, Lieuttaud
Precis de la Med. Prat. &c.

† Monro on Dropsy, p. 8. and the authors quoted above.

in some other cases, in the puerperal fever particularly, that inflammation may arise in the contained parts of the abdomen, in consequence of the sudden removal of pressure; and in whatever way that fact may be explained, I apprehend that a similar process takes place, after the reduction of hydropic swellings.* Hoffman and some others, explain such affections of the intestines from the long-continued action of the effused water on them, which, though a theory of no value, shows their conviction of the reality of the fact. It is evidently of great importance to ascertain in what cases such a termination may be expected, because the practice, in a disease of long continuance, ought to be considerably

* We must take care to distinguish, however, that in puerperal fevers the peritoneum appears to be first affected. In hydropic inflammation, the villous coat of the intestines is chiefly attacked.

influenced by it. This view will induce the physician to avoid all stimulating purgatives, and rather to solicit a very gradual discharge of the effused fluid, than to urge the constitution to a degree of action, that may increase to a morbid state. There was no particular appearance indicative of this termination, in the cases I have observed, excepting a general irritability of the habit, which always secured the effect of the diuretics administered.

In three other fatal instances, death was brought on by gangrene. This is commonly to be expected, in men, when the skin of the penis has become distended and tortuous. Johnson is the only patient whom I have seen survive this symptom. In respect of this state, also, as a probable termination of dropsy, it is evident, that brisk purgatives, in the confirmed stage of the disease, must be very injurious. I should even
dread,

dread, in such circumstances, the effects of digitalis on the moving powers of the circulation.

I have never had recourse to tapping, but when the state of the swellings threatened suffocation. Whenever I have been compelled to employ it, I have found the effusion renewed in great quantity, in the course of forty-eight hours, or within three or four days at the utmost.

HYDROCEPHALUS.

Great doubts must attend every apparent instance of success, in the treatment of hydrocephalus internus. Other diseases produce nearly similar symptoms, and mercury, the prevailing remedy in hydrocephalus, is used with

H 3 success.

success in those disorders; particularly in removing worms from the intestinal canal. The two following cases will prove that hydrocephalus may be survived, but I am inclined to regard them as spontaneous cures, little, if at all assisted by medicine. As new facts, however, they are worth recording, and as they afford clear instances of recovery, from a complaint generally deemed incurable, they may teach us not to despair, in similar situations.

In February, 1783, I was consulted for a boy, two years of age, who, about ten days before, had been suddenly deprived of his speech, of the motion of his right arm, and of that of both legs and feet. When I saw him, he had recovered the use of his arm, in some degree, but the lower extremities remained entirely useless. After the first appearance of these symptoms, the bones of the cranium had separated,

separated, and the right parietal bone was considerably elevated. The eyes were protruded, but, in a moderate light, the pupils had a natural appearance and contracted well. He underwent a feverish paroxysm every day. His pulse was commonly quick; his sleep much disturbed; and though naturally lively and active, he now appeared uncommonly dull. He had been blistered between the shoulders, without relief. I directed a blister to be applied over the fontanella, and ordered three grains of calomel to be given every second or third day. The paralytic symptoms went off rapidly, under this course, and at the end of a week, the bones of the cranium began to approximate. The sutures soon closed again, and the child recovered his usual spirits and activity with the use of his limbs.

In spring, 1789, the family of a labourer in Wood-Street, of the name

of Belcher, was attacked by the fever then prevalent. One of the children, a boy about a year and half old, was insensible during a great part of the course of the fever, and lingered much in his recovery. When the strength returned, an aversion to light was observed, and the head began to increase in size. At length, the sutures opened, and the child became blind. The motion of the lower limbs was lost about the same time. I gave calomel in small doses, every other day, so as to keep the body moderately open, but without exciting any signs of mercurial action. By degrees, the child became more lively, regained the use of its limbs, and the enjoyment of all its senses, but that of sight. The head then decreased in size, and at the end of six weeks, the sutures closed again. The patient grew strong, active and lusty. But a cataract of considerable size now appeared in each eye,

eye, and as an operation was not to be thought of in so young a subject, he was discharged, cured of hydrocephalus.

Perhaps the fortunate event of these cases was owing to the suddenness with which the effusion was made. In the first, no exciting cause could be discovered, and probably whatever cause had acted, had not been permanent. In the second, the febrile attack seemed to excite the effusion; and with the fever, the dangerous state of the disease had ended. Symptoms of recovery appeared, in the first patient, before I saw him; I have therefore little hesitation in considering his cure as spontaneous. The event of the second case is more doubtful in this respect. Little mercury was given, and no affection of the mouth was excited; neither was there any increase of urine. Perhaps the medicine assisted nature in
 some

some degree, but I am disposed to rank this also as an instance of spontaneous recovery, by recollecting the sudden amendment of the constitution in every respect. The relief of the complaint in the head appeared to follow this amendment, not to introduce it.

TABLE,

for Thomas J. [unclear]

to [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear]

to [unclear] [unclear]

[unclear] [unclear] [unclear]

[unclear] [unclear] [unclear]
[unclear] [unclear] [unclear]

[unclear] [unclear] [unclear]
[unclear] [unclear] [unclear]

[unclear] [unclear] [unclear]
[unclear] [unclear] [unclear]

TABLE,

Exhibiting the EFFECTS of some DIURETICS, in FORTY-SEVEN CASES of DROPSY.

Name.	Age.	Species of Dropsy.	Remedy.	Event.
1. Sarah Irlam	60	Anasarca	Digitalis	Cured
2. John Wilson	28	Ascites and Anasarca	Digitalis, 1st Course	Cured
The same		Relapsed	Digitalis, 2d Course	Not relieved
3. Elizabeth Hall	31	Leucophlegm. & incip. asc.	Digitalis	Cured
4. John Dawson	55	Ascites & Leucophlegmatia	Digitalis	Cured
5. James Heyes	27	Ascites and Anasarca	Digitalis	Cured
6. Elizabeth Atherton	19	Ascites & Leucophlegmatia	Digitalis	Cured
7. Ellen Farrar	19	Hydrothorax	Digitalis	Cured
8. Margaret Dewrden	9	Ascites	Digitalis	Cured
9. Elizabeth Bayley	25	Hydrothorax	Digitalis	Relieved
10. John Rowbottom	16	Hydroth. Ascites & Anasar	1. Digitalis, & Cream of Tartar with gamboge, 2. Calomel with Squills	Relieved
11. Ellen Wyatt	58	Ascites	1st. Course. Tonic Pills. Digitalis	Not relieved
The same			2d Course. Cream of Tartar in Solution, with Gamboge	Convalescent
12. James Lees	53	Ascites	Digitalis	Cured
13. William Williams	60	Ascites and Anasarca	1st Course. Digitalis	Not relieved
The same			2d Course. Tonic Pills	Died after the Swellings were removed
14. Elizabeth Williamson	30	Ascites & Anasar. 3d attack	Digitalis	Not relieved
15. Ellen Jones	60	Anasarca	Digitalis	Not relieved
16. William Waters	23	Ascites	Digitalis	Died
17. Job Bowers	37	Ascites and Anasarca	Digitalis, and Cream of Tartar with Gamboge	Died
18. Mary Rowley	30	Ascites	Digitalis	Not relieved
19. Mary Sadworth	21	Ascites and Anasarca	Digitalis	Not relieved
20. Elizabeth Oldham	48	Ascites	Digitalis	Not relieved
21. Elizabeth Williamson	60	Ascites	Digitalis	Not relieved
22. George Newton	70	Ascites, Anasar. & Hydroth.	Digitalis	Died
23. William Taylor	19	Ascites, Anasar. & Hydroth.	Digitalis	Died
24. Mr. C.	40	Hydrothorax	Cream of Tar. in Solution	Cured
25. A. B.	38	Hydrothorax and Ascites	Cream of Tartar	Cured
26. Peter Nield	45	Anasarca	Cream of Tartar	Cured
27. Thomas Mather	25	Ascites and Anasarca	Cream of Tartar	Cured
The same		Relapsed	Cream of Tartar	Cured
28. John Hopwood	48	Ascites and Hydrothorax	Cream of Tartar	Convalescent
29. Elizabeth Monk	45	Hydrothorax	Cream of Tartar	Relieved
30. Catherine Duny	20	Ascites	Cream of Tartar	Convalescent
31. Ann Wagstaff	25	Anasarca	Cream of Tartar	Cured
32. Jeremiah Wood	42	Anasarca and Hydrothorax	Cream of Tartar	Cured
33. Sarah Hartley	29	Ascites and Hydrothorax	Cream of Tartar	Died
34. Alice Wrigley	15	Ascites and Anasarca	Bacher's Tonic Pills	Died after the removal of the Swellings
35. Ann Waring	23	Ascites and Anasarca	Bacher's Tonic Pills and Infusum Diureticum	Cured
36. Betty Clay	46	Ascites	Bacher's Tonic Pills	Cured
37. Mary Winterbottom	58	Ascites	1st Course. Sp. Ether. Nitrosi.	Relieved. Convalescent
38. William Kay	12	Ascites	2d Course. Bacher's Tonic Pills	Cured
39. Hannah Wolstenholme	40	Anasarca	Bacher's Tonic Pills Pulvis Doveri Calomel	Cured
40. Thomas Jelly	38	Hydroth. Ascites & Anasar.	Calomel with Squills and Opium	1st Course; Relieved. 2d Course; died, after the removal of the Swellings
41. Mary Coxie	29	Hydrops Ovarii	Nicotiana and Sp. Etheris Vitriolici	Relieved
42. James Johnson	23	Ascites and Anasarca	Nicotiana	Not relieved
The same			Bacher's Tonic Pills	Relieved
43. Mary Rules.	1½	Ascites	Puncture Squills	Died
44. Charles Allen	1½	Ascites	Puncture	Died
45. Mary Beard	38	Ascites, Anasar. & Hydroth	Puncture	Died
46. Edward Osmotherly	2	Hydrocephalus	Calomel	Recovered
47. Thomas Belcher	1½	Hydrocephalus	Calomel	Recovered

Cases of Ascites alone, *thirteen*; of which, were

Cured,	5.
Died,	3.
Convalescent,	2.
Not relieved,	3.

Cases of Hydrothorax alone, *four*; of which,

Cured,	2.
Relieved,	1.
Convalescent,	1.

Cases of Anasarca alone, *five*; of which

Cured,	4.
Not relieved,	1.

Cases of Hydrocephalus, *two*; both recovered:

Case of Hydrops Ovarii, *one*; relieved.

Cases of Anasarca and Ascites complicated;
thirteen; of which,

Cured,	8.
Died,	1.
Relieved,	1.
Not relieved,	3.

Cases of Ascites and Anasarca, or of either, complicated with Hydrothorax; *nine*; of which,

Cured,	1.
Died,	6.
Relieved,	2.

Total

Total cured,	22.
— relieved,	5.
Convalescent,	3.
Not relieved,	7.
Dead,	10.
	<hr/>
	47.

It appears from this table, that cases of anasarca alone, or of anasarca and ascites complicated, are the most curable species of dropsy; next to these ascites; and that the most intractable kind is the complication of ascites and anasarca, or of either, with hydrothorax. This confirms the common opinion. My cases of hydrothorax alone have been very favourable; but they are not in sufficient number to justify a conclusion. The same observation applies to the instances of hydrocephalus, and to that of hydrops ovarii.

UVA URSI.

I have given this medicine in a considerable number of nephritic cases, in very moderate doses, and always with manifest advantage. When the pain is very acute, and the pulse quick, I begin the cure with bleeding, and a gentle purgative, composed of manna and a neutral salt. This purgative I repeat twice a-week, and on the intermediate days, direct the patient to take five* grains of uva ursi, and half a

* The smallness of this dose, in exhibiting a medicine generally given in the quantity of a scruple, may excite surprise. A medical friend, of high reputation, who inspected these papers before they went to the press, appeared very dubious respecting this particular. The facts, however, are exactly as I have represented, and I may add, that in doses of a scruple, or half a drachm, I have found this remedy produce nausea, even when joined with opium.

grain

grain of opium, three or four times a-day, according to the urgency of the symptoms. I have never found larger doses necessary. This method always relieves, and generally effects a cure. Of sixteen patients, treated in this manner, I have discharged twelve cured.* In reckoning the cures, I do not rest on the cessation of a single fit, but require a permanent relief from pain. Many of my patients have used the remedy for several months together, before this end was attained. The fits became slighter, and at length ceased.

The mode in which this remedy acts, is still unknown. It produces no sensible effect beside the abatement of pain, which cannot be attributed to the small quantity of opium joined

* Of the remaining four, two were much relieved, and two discontinued their attendance.

with

with it. Dr. Cullen's conjecture on this subject, though it seems to approach near the truth, still gives us an effect for a cause. Perhaps the secret is to be sought in the undiscovered process of the generation of calculus. If, as the new chemistry teaches us, the human calculus consist in a great measure of a peculiar acid, it is possible, that a bitter and astringent of a certain nature, may exert specific powers, by direct action on the solids, in preventing the separation of that acid from the fluids, in uncommon quantity.

I have had occasion to try the effect of uva ursi, in some cases of hæmaturia, in delicate female subjects, where there was every reason to conclude, that the hæmorrhage proceeded from the kidneys. It has always succeeded in removing the complaint.

From

From these, and some other facts, I have been led to believe, that this remedy acts specifically, as a tonic and astringent, on the kidneys.

HYSTERIA.

Men are frequently attacked by complaints which approach to the hysterical type. In the following instance, a young man was affected with regular hysteric fits, in consequence of continued vexation and anxiety.

In spring, 1789, I was desired to visit J. C. about seventeen years of age, on account of fits, with which he had been seized a few days before. I was told, that they began with great dejection of spirits, sighing, and uneasiness about the præcordi. He then became

became apparently insensible, but groaned much, and did not recover for a considerable time. He relapsed frequently, from slight causes, and often had three or four fits in a day. He said, that he felt the globus hystericus, at the approach of each paroxysm, and that he retained his senses, in some degree, to the termination of each. His pulse was weak, and hurried; his tongue somewhat foul; and his countenance timid. His evacuations were natural. I do not recollect the particular nature of his employment, but it was of a sedentary kind.

After clearing his stomach by an emetic, I directed some pills to be made up, composed of opium and asa-fœtida, and to be given in such a manner, that he took half a grain of the former, and four grains of the latter, every hour, previous to the approach of the morning paroxysm. On the

I

first



first day of taking the pills, the fit came on, but in a slighter degree. The next day, he was ordered to begin at a greater distance from the usual time of the fit. He took, by this means, three grains of opium, and more than a scruple of asafoetida. The paroxysm was effectually prevented by this dose without producing the smallest uneasiness to the patient. Two of the pills were given at bed-time, for a few nights afterwards, and the cure was finished by administering tonics. I have not heard that he has suffered any relapse.

DIABETES.

I have seen very few instances of this disorder, and can add nothing to its history, but one case in which the patient was cured. Any example of
success,

success, in a complaint generally so intractable, is interesting and encouraging.

Robert Backhouse, aged forty-five, was admitted in June, 1791. He had passed a very great quantity of urine, for several weeks. At the time of his admission, the flow of urine was greatest in the night, and prevented him from sleeping. He then passed from three to four quarts in the course of each night exclusive of at least one quart in the day. His urine was whey-coloured, and of a sweetish taste. He was much emaciated, and troubled with a constant thirst; his tongue appeared parched, and was divided by small fissures.

I directed for him a course of bark, with elixir of vitriol. In a fortnight, his urine came off in smaller quantity, and soon after was reduced entirely to

I 2 a natural

a natural state. He then complained of considerable heat and pain in the region of the bladder, which were removed by demulcents. He went out, with a cough, and some other pectoral complaints (for which he was desired to attend as an out-patient) but perfectly cured of his diabetes.

Dr. Sydenham seems to have considered this as a disease arising from debility,* but he has not taken notice of it as an idiopathic disorder. Our patient's symptoms indicated tonic remedies, and these had all the success I could desire. If they had failed, I should have joined the use of lime-water with them. This remedy has been considered, by some practitioners, as a kind of specific in diabetes.

The only remarkable circumstance which I could trace in the previous

* Of the epidemic diseases, from 1675 to 1680.

history of this patient, was that he had indulged himself in drinking spirituous liquors.

Several cases of diabetes mellitus have come under my care, since the first publication of this volume.

A complete cure is seldom obtained, in the advanced stage of this disease; yet by treating it as a disease of debility, in conformity to Dr. Sydenham's opinion, I have been enabled generally to relieve the patients, and sometimes to effect a cure.

The theory of diabetes, advanced by Dr. Cullen and Dr. Dobson, and adopted with additional error by Dr. Darwin, has been so solidly refuted by Dr. Baillie, that I think it unnecessary to enter into the discussion. I refer the reader, for these arguments, to the

Transactions of a Society for the improvement of Medical and Chirurgical knowledge, vol. II. art. 5.

In one case of diabetes, which terminated fatally, I obtained an inspection of the body, and found the kidneys greatly diseased. There were ulcerations in the pelvis of each kidney, and even the external surface of each was covered with deep ulcers, in a circular form. With such appearances before us, it would be idle to seek for the seat of this complaint in a distant organ, and it would be vain to expect a permanent cure, in such a state of the kidneys, from any remedy.

The suggestions of this defective theory, however, have proved useful, by introducing the practice of confining the patient to animal food, for which we are indebted to Dr. Rollo, and the efficacy of which will be strongly exemplified

exemplified in two of the succeeding cases.

From the view which I had taken of diabetes, I was induced to try a combination of Peruvian bark, uva ursi, and opium, in the proportions of a scruple of each of the former, to half a grain of the latter, four times a-day. The doses were taken with lime-water, which was also directed for the patients' common drink. Three cases of confirmed diabetes mellitus were cured by this plan. I shall now give a detailed view of some recent cases of the disease, exhibiting the progress of recovery.

Samuel Brookes, a middle aged man, was admitted, Oct. 10th, 1808, into the infirmary. He had been affected with diabetes, in a greater or less degree, for a year and half. The following table will shew the increase, and subsequent diminution of his urine.

TABLE.

Oct. 10, 1808,	in 12 hours,	6 pints.
12,	in 24 ditto,	10 ditto.
13,	ditto,	12 ditto.
14,	ditto,	$13\frac{1}{2}$ ditto.
15,	ditto,	14 ditto.
16,	ditto,	16 ditto.
17,	ditto,	$17\frac{1}{2}$ ditto.
18,	ditto,	15 ditto.
19,	ditto,	14 ditto.
20,	ditto,	15 ditto.
21,	ditto,	15 ditto.
22,	ditto,	17 ditto.
23,	ditto,	$16\frac{1}{2}$ ditto.
24,	ditto,	$14\frac{1}{2}$ ditto.
25,	ditto,	18 ditto.
26,	ditto,	15 ditto.
27,	ditto,	15 ditto.
28,	ditto,	$16\frac{1}{2}$ ditto.
29,	ditto,	18 ditto.
30,	ditto,	16 ditto.
31,	ditto,	17 ditto.
Nov. 1,	ditto,	15 ditto.
2,	ditto,	20 ditto.

Nov.

T A B L E.

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Nov. 3, 1808,	in 24 hours,	17 pints.
4,	ditto,	14 ditto.
5,	ditto,	$14\frac{1}{2}$ ditto.
6,	ditto,	14 ditto.
7,	ditto,	15 ditto.
8,	ditto,	14 ditto.
9,	ditto,	13 ditto.
10,	ditto,	9 ditto.
11,	ditto,	12 ditto.
12,	ditto,	12 ditto.
13,	ditto,	14 ditto.
14,	ditto,	12 ditto.
15,	ditto,	15 ditto.
16,	ditto,	14 ditto.
17,	ditto,	19 ditto.
18,	ditto,	14 ditto.
19,	ditto,	20 ditto.
20,	ditto,	19 ditto.
21,	ditto,	16 ditto.
22,	ditto,	20 ditto.
23,	ditto,	20 ditto.
24,	ditto,	19 ditto.
25,	ditto,	21 ditto.
28,	ditto,	18 ditto.
29,	ditto,	19 ditto.
30,	ditto,	16 ditto.
Dec. 1,	ditto,	17 ditto.
2,	ditto,	$16\frac{1}{2}$ ditto.
3,	ditto,	21 ditto.
4,	ditto,	18 ditto.

Dec.

Dec.	5, 1808,	in 24 hours,	17 pints.
	6,	ditto,	16 ditto.
	7,	ditto,	16 ditto.
	8,	ditto,	18 ditto.
	9,	ditto,	18 ditto.
	10,	ditto,	18 ditto.
	11,	ditto,	19 ditto.
	12,	ditto,	19 ditto.
	13,	ditto,	19 ditto.
	20,	ditto,	16 ditto.
	21,	ditto,	14 ditto.
	26,	ditto,	23 ditto.
	27,	ditto,	22 ditto.
	29,	ditto,	19 ditto.
	30,	ditto,	18 ditto.
	31,	ditto,	17 ditto.
Jan.	1, 1809,	ditto,	22 ditto.
	2,	ditto,	20 ditto.
	3,	ditto,	21 ditto.
	4,	ditto,	22 ditto.
	5,	ditto,	20 $\frac{1}{2}$ ditto.
	6,	ditto,	20 ditto.
	7,	ditto,	19 ditto.
	8,	ditto,	21 ditto.
	9,	ditto,	18 ditto.
	10,	ditto,	16 $\frac{1}{2}$ ditto.
	11,	ditto,	15 ditto.
	12,	ditto,	14 ditto.
	13,	ditto,	14 ditto.
	14,	ditto,	13 ditto.

Jan.

Jan. 15, 1809,	in 24 hours,	14 pints.
16, 8	ditto, 0.015	14 ditto.
17, 4.5	ditto, 0.015	12 ditto.
18, 1.5	ditto, 0.015	15 ditto.
19, 1.5	ditto, 0.015	15 ditto.
20, 8	ditto, 0.015	12 ditto.
21, 7	ditto, 0.015	12½ ditto.
22, 7	ditto, 0.015	14 ditto.
23, 8	ditto, 0.015	13 ditto.
24, 8	ditto, 0.015	10½ ditto.
25, 8	ditto, 0.015	10½ ditto.
26, 7	ditto, 0.015	12 ditto.
27, 8	ditto, 0.015	12 ditto.
28, 8	ditto, 0.015	11 ditto.
29, 8	ditto, 0.015	10½ ditto.
30, 8	ditto, 0.015	10½ ditto.
31, 8	ditto, 0.015	12 ditto.
Feb. 1, 8	ditto, 0.015	11 ditto.
2, 8	ditto, 0.015	10½ ditto.
3, 8	ditto, 0.015	10½ ditto.
4, 8	ditto, 0.015	10½ ditto.
5, 8	ditto, 0.015	10½ ditto.
6, 8	ditto, 0.015	10 ditto.
7, 7	ditto, 0.015	9½ ditto.
8, 6	ditto, 0.015	10 ditto.
9, 8	ditto, 0.015	8½ ditto.
10, 8	ditto, 0.015	6½ ditto.
11, 8	ditto, 0.015	5½ ditto.
12, 8	ditto, 0.015	6 ditto.
13, 8	ditto, 0.015	6 ditto.

Feb.

Feb. 14, 1809	in 24 hours,	$6\frac{1}{2}$ pints.
15,	ditto,	8 ditto.
16,	ditto,	$7\frac{1}{2}$ ditto.
17,	ditto,	$7\frac{1}{2}$ ditto.
18,	ditto,	$6\frac{1}{2}$ ditto.
19,	ditto,	8 ditto.
20,	ditto,	$7\frac{1}{2}$ ditto.
21,	ditto,	7 ditto.
22,	ditto,	8 ditto.
23,	ditto,	8 ditto.
24,	ditto,	8 ditto.
25,	ditto,	7 ditto.
26,	ditto,	8 ditto.
27,	ditto,	$7\frac{1}{2}$ ditto.
28,	ditto,	$7\frac{1}{2}$ ditto.
March 1,	ditto,	$6\frac{1}{2}$ ditto.
2,	ditto,	7 ditto.
3,	ditto,	8 ditto.
4,	ditto,	$8\frac{1}{2}$ ditto.
5,	ditto,	8 ditto.
6,	ditto,	8 ditto.
7,	ditto,	8 ditto.
8,	ditto,	8 ditto.
9,	ditto,	7 ditto.
10,	ditto,	9 ditto.
11,	ditto,	8 ditto.
12,	ditto,	7 ditto.
13,	ditto,	$7\frac{1}{2}$ ditto.
14,	ditto,	$7\frac{1}{2}$ ditto.
15,	ditto,	8 ditto.

March

TABLE. 141

March 16, 1809,	in 24 hours,	7 pints.
17,	ditto,	8 ditto.
18,	ditto,	8 ditto.
19,	ditto,	6 $\frac{1}{2}$ ditto.
20,	ditto,	8 ditto.
21,	ditto,	7 ditto.
22,	ditto,	7 $\frac{1}{2}$ ditto.
23,	ditto,	6 $\frac{1}{2}$ ditto.
24,	ditto,	6 ditto.
25,	ditto,	7 ditto.
26,	ditto,	6 ditto.
27,	ditto,	6 ditto.
28,	ditto,	4 $\frac{1}{2}$ ditto.
29,	ditto,	5 $\frac{1}{2}$ ditto.
30,	ditto,	5 $\frac{1}{2}$ ditto.
31,	ditto,	5 ditto.
April 1,	ditto,	5 ditto.
2,	ditto,	5 $\frac{1}{2}$ ditto.
3,	ditto,	6 ditto.
4,	ditto,	6 ditto.
5,	ditto,	5 ditto.
6,	ditto,	5 ditto.

This

This patient was much emaciated, when admitted, and had a thick yellow crust on his tongue. The prescriptions were;

Capiat. Pulv. Uvæ Urs.

— Cort. Peruv. āā ʒj.

— Opii grss quater in die.

Bibat Aq. Calc. ʒij. post sing. dos. Pulver.

On Dec. 19th, when he was evidently regaining his health, he was put on a strict diet of animal food: his looks were at that time improving. A diarrhæa was occasioned by the animal diet, in consequence of which his medicines were omitted, and he was put on common diet.

On the 26th, he was ordered to take his powders again, but ten grains of the extract of Ratania were substituted for the Peruvian bark. His urine was still decreasing in quantity.

On

On Jan. 11th, being much better in health, he was again restricted to animal food, and the plan of medicine and regimen was continued without variation, till the 10th of April, when he was discharged; the quantity of urine being then natural, though it still contained saccharine matter.

Dr. Henry has favoured me with the following remarks on the chemical properties of the urine.

“ The first examination, which I made
“ of Brookes’s urine, was in November
“ last. It had then, distinctly, all the
“ chemical properties, that characterize
“ this fluid in diabetes mellitus. Its
“ specific gravity varied from 1029 to
“ 1033, the first urine voided in a
“ morning by a healthy person having
“ usually the specific gravity of 1020.
“ When evaporated by the heat of
“ steam, it, gave about 1-15th its weight
“ of

“ of a tenacious extract, which became
“ hard and brittle on cooling, and con-
“ sisted almost entirely of saccharine
“ matter, without any of that peculiar
“ substance (urea) which distinguishes
“ healthy urine. No urea, at least,
“ could be discovered by the application
“ of nitric acid ; but by other methods
“ of analysis, which I shall soon have
“ occasion to publish, a small proportion
“ was detected, and may, I believe, be
“ discovered in all diabetic urine. This
“ fact is of some importance ; inasmuch
“ as it proves that the secretory office of
“ the kidneys, however it may be im-
“ paired, is not altogether deranged even
“ in the worst form of the disease.

“ On the 22d of February, the urine
“ of the same person yielded 1-16th its
“ weight of extract, a variation from the
“ former proportion not greater than
“ often occurs in the same day. The
“ extract was equally saccharine as be-
the

“ fore, and still afforded no scales on
 “ the addition of nitric acid. On the
 “ 4th of April, it gave 1-12th; and, on
 “ the 8th, between 1-10th and 1-11th
 “ its weight of saccharine matter, with-
 “ out any sensible portion of urea.
 “ Hence it appears, that notwithstanding
 “ the patient’s amendment, and the great
 “ reduction of saccharine matter daily
 “ evacuated, its proportion, in a given
 “ quantity of urine, had rather increased
 “ than diminished. This is contrary
 “ to the experience of Dr. Rollo and
 “ many of his correspondents, who
 “ found the effect of animal diet to be
 “ a diminution of the proportion of
 “ extractive matter, and the re-appear-
 “ ance of urea.

“ I had no opportunity of examining
 “ Winterbottom’s urine, till he had been
 “ some time exclusively using animal
 “ food; but his description leaves no
 “ doubt that it had been before largely
 K “ impregnated

“impregnated with sugar. It has now,
“in every respect, the properties of
“healthy urine, containing no saccha-
“rine matter, and affording the natural
“proportion of extract, in which urea
“is made remarkably apparent by the
“test of nitric acid.

“A singular appearance in Brooks’s
“urine, at one period of the disease,
“was the deposition of a large quantity
“of coagulated albumen, in round
“grains resembling pearl barley. Du-
“ring three days, this deposit amounted
“to two ounces and a half.

“I examined, with the greatest atten-
“tion, a small quantity of blood, which
“had been taken from Brooks’s arm.
“The serum had precisely the same
“specific gravity as that of healthy
“blood, and coagulated at the same
“temperature. It had not the whey
“colour, which I remember once to
“have

“have remarked in an instance of
“this disease, nor did it afford the
“smallest trace of sugar on the most
“careful analysis.”

Marcellus Winterbottom, a young man, had been ill of diabetes for two months. He was admitted Dec. 26th, 1808. He was ordered the same medicines with Brookes, and on Jan. 21st, was confined to a strict diet of animal food. No variation took place, till the time of his being discharged, when his urine was natural, both in quantity and quality.

TABLE.

Dec. 29, 1808,	in 24 hours,	17 pints.
30,	ditto,	17 ditto.
31,	ditto,	14 ditto.
Jan. 1, 1809,	ditto,	14½ ditto.
2,	ditto,	15 ditto.
3,	ditto,	16 ditto.
4,	ditto,	16½ ditto.
5,	ditto,	15½ ditto.
6,	ditto,	16½ ditto.
7,	ditto,	15 ditto.
8,	ditto,	15½ ditto.
9,	ditto,	16 ditto.
10,	ditto,	15½ ditto.
11,	ditto,	14 ditto.
12,	ditto,	15½ ditto.
13,	ditto,	16 ditto.
14,	ditto,	15 ditto.
15,	ditto,	16 ditto.
16,	ditto,	15 ditto.
17,	ditto,	16 ditto.
18,	ditto,	17½ ditto.
19,	ditto,	14 ditto.
20,	ditto,	15 ditto.

Jan.

TABLE.

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Jan. 21, 1809,	in 24 hours,	14 pints.
22,	ditto,	$13\frac{1}{2}$ ditto.
23,	ditto,	$13\frac{1}{2}$ pints.
24,	ditto,	$12\frac{1}{2}$ ditto.
25,	ditto,	12 ditto.
26,	ditto,	$11\frac{1}{2}$ ditto.
27,	ditto,	11 ditto.
28,	ditto,	10 ditto.
29,	ditto,	10 ditto.
30,	ditto,	11 ditto.
31,	ditto,	10 ditto.
Feb. 1,	ditto,	11 ditto.
2,	ditto,	12 ditto.
3,	ditto,	10 ditto.
4,	ditto,	$9\frac{1}{2}$ ditto.
5,	ditto,	9 ditto.
6,	ditto,	10 ditto.
7,	ditto,	10 ditto.
8,	ditto,	12 ditto.
9,	ditto,	$9\frac{1}{2}$ ditto.
10,	ditto,	11 ditto.
11,	ditto,	$9\frac{1}{2}$ ditto.
12,	ditto,	9 ditto.
13,	ditto,	8 ditto.
14,	ditto,	10 ditto.
15,	ditto,	$8\frac{1}{2}$ ditto.
16,	ditto,	$8\frac{1}{2}$ ditto.
17,	ditto,	8 ditto.
18,	ditto,	$8\frac{1}{2}$ ditto.
19,	ditto,	8 ditto.

K 3

Feb.

Feb. 20, 1809,	in 24 hours,	7½ pints.
21,	ditto,	7 ditto.
22,	ditto,	8 ditto.
23,	ditto,	7 ditto.
24,	ditto,	10 ditto.
25,	ditto,	8 ditto.
26,	ditto,	8½ ditto.
27,	ditto,	7½ ditto.
28,	ditto,	7½ ditto.
March 1,	ditto,	8 ditto.
2,	ditto,	7 ditto.
3,	ditto,	6 ditto.
4,	ditto,	7 ditto.
5,	ditto,	8 ditto.
6,	ditto,	7 ditto.
7,	ditto,	7 ditto.
8,	ditto,	9 ditto.
9,	ditto,	7 ditto.
10,	ditto,	7 ditto.
11,	ditto,	6 ditto.
12,	ditto,	7 ditto.
13,	ditto,	5½ ditto.
14,	ditto,	6 ditto.
15,	ditto,	7 ditto.
16,	ditto,	8 ditto.
17,	ditto,	5 ditto.
18,	ditto,	7 ditto.
19,	ditto,	5 ditto.
20,	ditto,	7 ditto.
21,	ditto,	5½ ditto.

March

TABLE. 151

March 22, 1809,	in 24 hours,	6 pints.
23,	ditto,	6 ditto.
24,	ditto,	$5\frac{1}{2}$ ditto.
25,	ditto,	6 ditto.
26,	ditto,	6 ditto.
27,	ditto,	6 ditto.
28,	ditto,	$5\frac{1}{2}$ ditto.
29,	ditto,	$5\frac{1}{2}$ ditto.
30,	ditto,	$5\frac{1}{2}$ ditto.
31,	ditto,	$3\frac{1}{2}$ ditto.
April 1,	ditto,	$4\frac{1}{2}$ ditto.
2,	ditto,	5 ditto.
3,	ditto,	4 ditto.
4,	ditto,	4 ditto.
5,	ditto,	$5\frac{1}{2}$ ditto.
6,	ditto,	5 ditto.

In another case, which was treated with the same medicines, but without restriction of diet, I did not succeed. The patient at first made fifteen pints of water in twenty-four hours, and when he was discharged, the quantity was only reduced to five quarts. It contained saccharine matter.

While these cases prove the efficacy of this mode of treatment, they shew the importance of animal diet in this disease.

EPIDEMIC FEVER

OF 1789, AND 1790,

In the winter of 1789, and in spring 1790, an epidemic fever prevailed much in Manchester and Salford. The preceding summer and autumn had been uncommonly moist, and the month of November set in with much cold and heavy rain. The symptoms were, pain in the head, back, and limbs; sickness; cough; and in several cases towards the end of the winter, great pain and difficulty in voiding urine. The pulse was quick, but soft; and sometimes intermitted in the first days. The tongue was generally white; sometimes with a longitudinal brown stripe in the middle. The patients were
commonly

commonly costive at first. In the course of the first week, the head-ach and pain of the back became excruciating, and were often accompanied with low delirium. The skin was, at this period, in most cases dry and harsh, without any remarkable heat; but in some cases, profuse watery sweats took place. In the second week, the dryness and harshness of the tongue increased; the eyes became inflamed; the patient was inattentive to what passed around him, but restless. The cough increased to a distressing degree; and costiveness became habitual. At the end of this period, the lips and teeth had generally contracted a black fur; the patient often groaned, and sometimes shrieked aloud: the skin was parched and burning; and the disease became a formed typhus.

The epidemic was most prevalent from November to January, in the winter,

winter, and appeared again in the succeeding April. When the first frosts set in, most of my patients who then had the fever became delirious. Those women who recovered, were commonly affected with hysterical symptoms, after the fever disappeared. The first instance of this kind was somewhat intricate. After the abatement of all the feverish symptoms, the patient was seized with violent sickness and vomiting in the evening, which continued to a very late hour. An anodyne was prescribed, and she was better next day. But the sickness and vomiting returned, on the succeeding evening, and I was then told, that she had thrown up some green matter. On particular inquiry, I found that some degree of the globus hystericus attended the paroxysm. The goodness of her pulse every morning, after a vomiting-fit of three or four hours, confirmed me in my opinion of the
nature

nature of the complaint. Accordingly, I ordered draughts with asafœtida and opium, and found that the paroxysms yielded readily, and soon entirely left her.

The mortality in this epidemic was not great, though we had dreadful accounts of its ravages in some of the neighbouring towns. Out of the first ninety patients whom I attended in it, two only died. One of these had been confined to bed during a fortnight before I saw her. In general, those who were visited during the first three or four days of the disease, recovered very early. But when patients were suffered to linger for a fortnight or three weeks, before assistance was desired, of which I had too many instances, the disease proved tedious and difficult.

In the early stage, antimonial emetics; and gentle laxatives did eminent service.

service. The fever often disappeared, as soon as the bowels were cleared. In general, the patients bore purging well, and even required it repeatedly; the pulse commonly became firmer and more regular, after evacuations of this kind.

J. M. had been attacked with the usual symptoms of the epidemic, three days before I saw him. He was constive, and his pulse intermitted every fifth or sixth stroke. I ordered him five ounces of infusion of sena, which produced several loose stools. Next day, the pulse was regular, and the intermission was entirely gone. This is the only clear instance of the Solanian pulse that I have met with. After unloading the bowels, if the skin continued dry, and the pulse quick, a diaphoretic mixture was ordered, containing antimonial wine and laudanum, in the quantity of fifteen drops

drops of the former, and ten of the latter, every three hours. The use of diluents was enjoined; and a particular attention to cleanliness (the most difficult part of the process) carefully enforced. In all offensive houses, I obliged the inhabitants to white-wash the whole; and large jars, containing new-slaked lime, were placed in the chamber of every patient. When the disorder was accompanied with profuse sweats, the spiritus ætheris vitriolici, in doses of half a drachm, repeated every three or four hours, gave great relief. The pains in the head and back, when they resisted these methods, were effectually relieved by blistering between the shoulders. This remedy exerted particular power over the epidemic. A single blister removed every complaint, in many cases.

The dysuria, which prevailed in several instances where no blister had been

been applied, gave way to the large use of diluents combined with mucilage of gum arabic, and to the interposition of opium.

The use of bark was seldom absolutely necessary, excepting when the disease had run into typhus. In the earlier stage, bark did not appear to accelerate the cure, and was only useful by removing debility, after the fever had disappeared,

In some of those unfortunate cases, where the patient had been confined to bed during three or four weeks, before recourse was had to the Infirmary, neither bark nor wine, though assisted by other stimulants, produced any effect on the disease. Even when I could depend on the regular administration of the medicines, I have seen patients waste away, insensibly to themselves, and to those about them; and after
lying

lying in a kind of middle state, not dead, but scarcely alive, expire at the end of some weeks. Several patients came under my care, during the intense heat of the last summer, who had been ill from three weeks to a month each, when I first visited them. Two of them* were in this state, and were evidently hastening to their graves, notwithstanding the free use of tonics and antiseptics, when the heat of the weather, and the closeness of their apartment induced me to think of applying the stimulus of cold, in the manner which has been successfully practised in some other hospitals.† I therefore ordered them to be washed with cold water, one very close even-

* Anne and Frances Fowden.

† Dr. Wright of Jamaica recommends cold bathing, even in the beginning of fevers, in warm climates. His confidence in the remedy was proved by his practising it in his own case. London Med. Journal, vol. VII. p. 110.

ing.

ing. The pulse was raised next morning, and they were more sensible. The ablution was repeated next night, and the favourable change continued. I then directed them to be completely immersed, afterwards to be well rubbed, with coarse towels, and laid into bed, with the lower extremities wrapped in flannel. The consequence was, an immediate appearance of recovery, which was followed by a regular progress to convalescence.

A third patient,* sister to the two former, contracted the fever, and in the course of a fortnight sunk into the same languishing condition. She was washed with cold water two or three times a week; was sensibly better after every ablution; and recovered completely.

A fourth patient,† about the same time, was seized with the cholera, then

* Jane Fowden.

† Thomas Gibson.

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raging in the town. His vomiting and purging were soon stopped (I saw him on the first day) but a great stupor and prostration of strength remained. His pulse was hurried, his countenance yellow, and his tongue covered with a thick crust, brown in the centre. After using tonics and stimulants, and among the latter, blisters to the temples, with little effect, I directed him to be washed all over with cold water. It appeared to refresh him much; he was more sensible and attentive next day, and the ablution was repeated. He even became fond of it. In a few days he was able to come down stairs, but his friends were imprudent enough to let him indulge in animal food, which brought on a diarrhæa, and occasioned an entire change of the course.

Another patient, Jane Jones, caught the fever by lodging in the same house
with

with the three sisters already mentioned. She had been ill for five weeks before I was informed of her situation. The mistress of the house had admitted this person fresh from the country, after I had warned her of the danger of receiving new lodgers into a house infected in every room. Alarmed at the effect of her imprudence, when she found the girl sicken, she would not suffer me to be informed of her illness, though I was then visiting herself and three of her children, who successively caught the disease; and the secret was only betrayed by the screams of the poor creature, which were heard in the adjoining house. An inquiry took place, and I was made acquainted with the truth. I found her delirious, with a black fur on the lips and teeth; her cheeks extremely flushed, and her pulse low, creeping, and scarcely to be counted. Finding that the bark with stimulants, wine,

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and the application of blisters produced no alteration, but that on the contrary she became more insensible, and passed whole nights in shrieking, I ordered her to be completely washed with cold water. The first and second trials produced no remarkable effect, but finding her no worse, I directed her to be entirely immersed. Next day, she was able to sit up. The remedy was repeated at proper intervals, and she recovered perfectly. All these cases occurred, during the excessive hot weather of July and August, 1791. How far they will apply, in cooler seasons of the year, must be determined by future observations.

The recovery from the state of typhus was, as usual, very gradual. In a few instances abscesses formed, and ended the complaint. Margaret Thompson, aged twenty-six, was admitted November 9, 1789, with the symptoms

toms of the prevailing epidemic, which she attributed to contagion. In the course of a fortnight, she was tolerably free from fever, and seemed to recover very quickly. But on the first day of a smart frost, she was induced to go out, and to walk as long as she could support herself. The fever returned next day, with great violence; a severe diarrhæa came on; and the cough became incessant, and violent. A constant delirium attended these symptoms, so that the case appeared entirely hopeless. Near three weeks were spent in combating these alarming appearances: her diarrhæa was then lessened, and she became rather more sensible. She now complained greatly of a pain in her right side, which kept her in constant agony, and obliged her to lie almost always on her face. Upon examination, I found a round hard tumour under the false ribs on the right side, deep seated, and not affecting the

colour of the integuments. She felt often a violent throbbing in it, and was seized with shiverings several times in the course of the day. She now passed under the care of another practitioner, and I only know, in general, that the tumour burst externally, and that she recovered. If, as there was reason to suspect, this was an abscess of the liver, the case may be added to the number of fortunate escapes.

In some instances, where constant stupor and low delirium prevailed, with redness of the tunica albuginea, and a dark-red fulness overspread the face, I found bleeding with leeches in the temples, succeeded by moderate doses of bark, combined with musk, very useful. Towards autumn, 1790, several cases of petechial fever occurred to me, and, in one quarter of the town, the typhus was complicated with an inflammatory affection of the peritoneum.

neum. With the common appearances of typhus, there was pain and distention of the abdomen; the patient was sometimes obstinately costive, and again violently purged. Two cases of this kind proved fatal; one or two others recovered, by the timely application of blisters to the abdomen. Children only were thus affected.

The first instance that occurred to me, was that of John Scholfield, aged seven. He had pains in his head and back, but complained particularly of his belly, which was distended. He was alternately costive and loose; his pulse was weak; his tongue covered with a thick brown crust. His countenance was ghastly, and clay-coloured. He appeared to be sometimes easier; but a stupor came on, and he died on the eighth day of the disease.

On dissection, the whole intestinal canal appeared greatly inflated; in many places it was externally inflamed, but no marks of disease were discoverable within the cavity of the tube. A thick inflammatory exsudation was spread over the whole surface of the peritoneum, which, in several places, gave an appearance of adhesions between the turns of the intestines.

In the other fatal instance of this disease, the patient was covered with petechiæ, from the first attack. Perhaps local inflammation is more commonly joined with typhus than we are aware. Sir John Pringle's dissections prove, that suppuration in the brain is no unusual effect of such fevers; and in different seasons, the determination seems to be made to the bowels or lungs, according to the state of the prevailing epidemic.

In

In the course of the last twelve months, I have met with several instances of putrid fever, in young girls, accompanied with broad maculæ, on the body and limbs, and a gangrenous state of the labia pudendi. The parts were greatly tumefied, and extremely painful. It was a very fatal complaint.

J. C. was brought to me as a paralytic patient. The motion of the right side was nearly destroyed; his speech was greatly impeded, and his eyes were wild and distorted. On inspecting his tongue, I perceived a thick feverish crust, with a brown list along the centre, and his pulse was hurried. He had been ill for some time, and I was told by his attendant, that he was at first attacked with strong feverish symptoms. Even after the paralytic appearances, he continued to complain of rigors, and of pain in the small of his back. All these circumstances
gave

gave suspicion that typhus was the original disease, though the paralysis was now the most alarming appearance. He died the next day.

On examining the brain, a livid depression was remarked on the upper part of the lateral lobe of the left hemisphere. Under this, an abscess was found, containing a large quantity of pus, and extending into the left ventricle. The weight of the fluid made that part of the hemisphere protrude so much, that only the right side of the corpus callosum was visible, when the hemispheres were separated in the usual way, to obtain a view of that substance. Another abscess was discovered in the same hemisphere, which did not communicate with the former. Suppuration had taken place in the right hemisphere, and the ventricle of the same side was full of pus. The spinal marrow was flattened, appeared

peared not more than half its natural size, and was surrounded with water.

Fevers of this species always exist among the poor, in certain quarters of this town; and their ravages are only checked by the privilege which patients in indigent circumstances enjoy, of being visited at their own houses by the physicians of the infirmary. As the sick are equally apprehensive of the attack, and instructed in the means of procuring assistance, they commonly apply early to the infirmary, and are often seen in the first days of their illness. An opportunity is thus afforded of cutting the disease short, and of using precautions for securing the rest of the family from the effects of contagion. But the abuses which perpetuate the germ of the disorder cannot be remedied by the activity of any individual, or the succours of any charitable institution now existing. It will

will not be useless, however, to point them out; if they cannot be entirely done away, they may be lessened; and though a spirit of benevolence already prevails among the inhabitants of Manchester, it may add strength to its exertions to shew, that the health of the rich is often nearly connected with the welfare of the needy.

1. The mean lodging-houses, in the out-skirts of the town, are the principal nurseries of febrile contagion. Some of these are old houses, composed of very small rooms, into each of which three, four or more people are crowded to eat and sleep, and frequently to work. They commonly bear marks of a long accumulation of filth, and some of them have been scarcely free from infection for many years past. As soon as one poor creature dies, or is driven out of his cell, he is replaced by another, generally from the country, who

who soon feels in his turn the consequences of breathing infected air. During all this time, the master of the house is totally regardless of the misery before his eyes, while he and his family remain untouched; and it requires some exertion to produce any attention to cleanliness or ventilation. The latter object, indeed, can be very imperfectly obtained in many of these houses, when they are situated in dark narrow courts, or blind alleys. In most of these places lodgers are received. The consequence is, a perpetual succession of fever-patients in them. In other parts of the town, the lodging-houses are new, and not yet thoroughly dirty, but in these the upper story is laid into one room, directly under the tiles, pierced through both by the sun and wind. In this room eight or ten people often lodge, and as the beds almost touch one another, the contagion of fever, once introduced,

roduced, can hardly be prevented from spreading. But it is chiefly in old houses, confined in narrow passages, that contagion is produced. Of the new buildings, I have found those most apt to nurse it, which are added in a slight manner to the back part of a row, and exposed to the effluvia of the privies.

2. The custom of inhabiting cellars, also tends to promote both the origin and preservation of febrile infection. But even in them, the action of filth and confined air is always apparent when fevers arise. I have often observed, that the cellar of a fever-patient was to be known by a shattered pane, patched with paper, or stuffed with rags, and by every external sign of complete dirtiness.

3. After all that has been done for the ventilation of cotton-mills, I fear that

that fevers are still produced in some of them. I attended several patients, last summer, in the worst state of typhus, who had all worked in one cotton-mill, and all of whom became ill about the same time.

4. Other permanent causes of the production of contagion, are, want of proper food and clothing, sleeping on the floor of a damp cellar, with few, or no bed-clothes, and the constant action of depressing passions on the mind. These causes also increase the danger of the disease in a very great degree. I have seen patients in agonies of despair on finding themselves overwhelmed with filth, and abandoned, by every one who could do them any service, and after such emotions I have seldom found them recover.

*Illud in his rebus miserandum et magnopere unum
Ærumnabile erat, quod, ubi se quisque videbat
Implicitum morbo, morti damnatus ut esset,
Deficiens animo mæsto cum corde jacebat
Funera respectans, animam & mittebat ibidem.*

Lucret. lib. VI.

5. The

5. The same inattention in buying infected clothes prevails among the poor in Manchester, that is noticed by authors, as extending the plague in the Turkish dominions. When a fever seizes one or more of the members of a labouring family, as those who act as nurses are debarred by that duty from working, every part of their furniture that can be disposed of, is gradually sold for subsistence. At length, all but the sick are almost stripped even of their bed-clothes, to support life, and the action of hunger, dampness and despondence prepares fresh victims to the disease among the rest of the family. The clothes thus disposed of, thoroughly penetrated by contagious effluvia, are purchased by healthy persons, without suspicion; and thus fevers may often arise among the servants of the rich, as well as by their incautious visits to the sick. It may be a practice occasionally, with the broker, to
heat

heat such articles in an oven, but that is done with no design of destroying contagion.

If lodging-houses were licensed, and brought under the notice of the civil magistrate, many of the causes of fever might be prevented. They might be visited, by proper officers, frequently, and regular reports of the names, occupations, conduct, &c. of the lodgers, as well as of the state of the houses with regard to infection, might be laid before the magistrates of the district. It would not be difficult to discover, at what point the want of cleanliness becomes dangerous, and as far as scouring and white-washing can remedy that defect, the hazard might be prevented. But a considerable degree of trouble and expence would attend the efforts of the inspectors to preserve the beds and bed-clothes in tolerable order. Wretches are so frequently received

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into such places, in a state of extreme filthiness, that the most active benevolence must despair of supporting comfort in them by any exertions. For, as it is very difficult to convince the poor, that close and dirty rooms are noxious, there would be no great probability of their adopting willingly regulations enforced by authority. Where stubbornness and contempt would not avail, evasions would be greedily sought, and the vigilance of the inspectors baffled by every art of mistaken cunning.

To put them under some regulations, however, is certainly desirable for many other reasons. But a principal advantage, in a medical view, where the means of prevention should prove inadequate, would be the power of clearing an infected house of its inhabitants, on the representation of the inspectors, and of keeping it empty,
till

till all necessary methods of cleaning and sweetening it should be employed. This plan would require the aid of fever-wards, to be established in different quarters of the town, to receive patients from infected houses, or from close cellars, or pent-up rooms, where the want of air and of proper attendance leaves little chance of escape to the sufferer. The parish-officers, at present, find clothes and blankets for the sick-poor, but beds should also be provided, on occasion. A plan similar to this has been actually practised at Bury,* in this neighbourhood, with success, and if the trouble would be greater in Manchester, the danger is proportionably great. Where so much care is already taken, to provide relief and medical assistance for the sick-poor, the superior duty of preventing their

* See Sir William Clarke's Address to the Inhabitants of Manchester, &c. on this subject, printed in 1790.

distresses may yet be hoped to come into action.*

This hope has been realized, even beyond my expectation, by the success of the fever-wards, established in 1796.
of

* I have met with an instance of phthiriasis, as the consequence of a fever, which arose in a dirty lodging-house in Salford. It was situated in a narrow covered passage, ending in a back-court; the walls appeared to have been overspread with filth for many years, and the rooms were crowded with beds, into which the most loathsome objects were admitted nightly for a few halfpence. Contagion had been introduced by some of those unhappy creatures, and the mistress of the house and her son were attacked by a typhus. She soon recovered, but he lingered in a weak state for a considerable time, and after being enabled to creep abroad again, was affected with phthiriasis. He applied to me, a year afterwards, to be received as an in-patient. The complaint was still going on, and he was less emaciated and enfeebled, than might have been expected. Such are the effects of the present method of lodging the poor. They are driven to hire disease, and when fevers prevail in the families inhabiting these cells, to undergo the horror of lying in the same room, and often in the next bed, to the dying or the dead. The charity of the eastern nations provided spacious accommodations for the traveller and the vagrant, in their Caravanserais. But the eastern supineness has suffered the noblest of those structures to contract the inconveniences incident to promiscuous resort. Among the capricious dispositions so frequently made of superfluous wealth, it is rather surprising, that no benevolent Quixote has ever thought of furnishing accommodations of a similar nature for the poor of this country; especially

of which an account will be found in another volume. I have some important additions to make, to the preceding observations.

especially as fancy has evidently been far stretched to discover or even to invent objects of posthumous charity. Perhaps it may relieve the waverings of some mind, to suggest a whimsical scheme, newer, and somewhat more respectable than a hospital for cats, a retreat for persons who are born to a particular surname, or a single night's shelter for ten poor men, "not rogues or proctors."*. In a building on such a foundation, constructed with a view to proper ventilation, but excavated by flues, and capable of being occasionally heated by the steam of warm water, a straw-mat and a blanket would be luxury to a poor man, who would gladly pay an equal sum for admission, to that required by a keeper of fever-beds. A bath, in a proper situation, might be ready for the preparation of impure lodgers, and coarse, clean dresses of flannel might be furnished for the night by the fund, either gratuitously, or for a trifling sum. Such a place, properly superintended, might prove an asylum to those who wish to avoid guilt; and would assure the good conduct of every person admitted, during the night. Many of the wretches who now disgrace the public streets at midnight, would be happy in finding such shelter. These are distresses from which, in extensive towns, neither talents nor virtue will always secure the unfortunate, and their relief should not be trusted to the precarious aid of private benevolence. *Savage* is known to have slept in the ashes of a glass-house, and *Johnson* to have rambled all night through the streets of London, from incapacity to procure a comfortable lodging.

* For an account of the last Institution, see the Antiquarian Repertory.

The fever generally prevalent in Manchester, and the surrounding county, is a mild typhus. But in particular seasons, it is attended by symptoms which are not clearly indicated by practical writers, and which I think it proper to mention, because they are equally unexpected and distressing to the practitioner.

In the second, or third week of typhus, when the fever appears moderate, and the probability of recovery is strong, a sudden determination takes place to the head or breast, sometimes to the bowels, accompanied with extreme pain, and the patient is carried off in the course of a few hours. I have seen the metastasis, in the genuine typhus, and in very young subjects, as rapid as the translations in gout. If the patient survives these attacks, the fever sometimes changes its type. In one case, where a typhus was unusually protracted,

protracted, after several hazardous determinations to the stomach and bowels, the fever assumed the form of an intermittent, and the patient was recovered with great difficulty, by the use of the strongest stimulants.

The frequency of such accidental metastasis as that I have described, in our fever-wards, in 1805, and the spring of 1806, was truly alarming. Dissection threw little light on their nature, and only served to shew that they depended more on changes in the nervous, than the sanguiferous system.

Towards the end of autumn, we are generally visited by remittent fevers; and I scarcely recollect a season, in which some obstinate cases of this nature have not occurred, which resisted all the usual methods of cure. A succession of melancholy events of this kind, induced me to look for a more powerful

tonic than bark or steel, and from the analogy between intermittents and remittent fever, I turned my thoughts to the employment of *Arsenicum album*, for the revival of which, as a medicine, the public are indebted to the late Dr. Fowler. I soon had occasion to employ it, in some very dangerous, and tedious remittents, and I found it a safe and certain remedy. It generally lessens, if it does not suspend, the second paroxysm after it is exhibited, and it effects the purpose without producing the slightest disturbance in the habit. I have generally given, to an adult, five drops of the saturated solution, every four hours, and I have seldom found it necessary to exceed this dose.

In one case, where I ordered this remedy, the remittent had continued six weeks, in another, nearly two months, without any abatement of the symptoms,

toms, and both patients were sinking fast into the grave, when they were saved by the use of arsenic. The only sensible effects produced by it, are the removal of the crust on the tongue; the appearance of a sediment in the urine; and encreased firmness of the pulse.

Having frequently experienced the efficacy of this medicine in remittents, I was induced to try it in the last stage of typhus, when neither bark, wine, or brandy, cold bathing, or occasional doses of cayenne pepper, had the effect of rousing the powers of life, or of lessening the thick crust, which lay like a black marble slab on the tongue. With such cases, every man in extensive practice must have met; it has often been my lot to encounter several of them, in the course of a few weeks. I found that the arsenical solution uniformly cleared the tongue, in two or
three

three days, and that the fever gave way rapidly afterwards. The favourable alteration, after the change of medicines, was too great to admit any doubt respecting its cause, and the number of such events, which I have witnessed, leaves no room for uncertainty. It is a singular advantage, attending the use of arsenic, in these cases, that it does not operate as a general stimulant, but merely as a sound tonic. Neither the concomitancy of cough or dyspnæa, therefore, prohibits its use in typhus. The only contra-indication is a tendency to diarrhæa, or nausea. Yet I have been able to give the solution in the dose of two or three drops for a dose, even when the bowels have been very irritable, by combining it with a small quantity of laudanum.

As soon as the feverish paroxysms are stopped, I think it prudent to suspend the use of the arsenical solution, and
to

to support the patient with bark, and different cordials. But I never saw any inconvenience from the use of the mineral, excepting a slight soreness of the throat and lips.

I also make it a rule to delay the exhibition of this medicine, till it is evident that the usual remedies are not likely to succeed: in producing an agent of such powers, there ought to be a "*dignus vindice nodus*;" and its administration ought to be considered as a matter of solemnity, as its abuse would prove so extremely pernicious, in rash and ignorant hands,

In the course of the last twelve months, I have met with some cases of typhus, in which there was a very distressing dyspnoea, which continued during the whole fever, without any appearance of inflammation. In general, the difficulty of breathing was
continual,

continual, though aggravated during the febrile exacerbations, but in one case, respiration was perfectly free, during the intervals of the paroxysms, and regularly became very difficult on the return of the hot fit.

In these circumstances, which precluded the use of bark, I had recourse to the extract of the Ratania root, lately introduced, (at least, lately known by that name) from South America, and I have found it a valuable substitute for the chincona. The intense bitter of the extract is softened to an agreeable astringency, when it is dissolved in water, (by the intervention of a little alcohol) in the proportion of from five to ten grains to an ounce, and its effects on the patient's strength and spirits are peculiarly cheering. Its flavour, in this state, strongly resembles that of port-wine, and its operation in fever appears to me very similar.

The

The extract of *Ratania*, notwithstanding its sensible quality of astringency, does not produce costiveness; in this respect also it frequently merits a preference to Peruvian bark.

Since the establishment of our fever-wards, I have carried the practice of cold bathing to a considerable extent, in the latter stage of typhus, and in the commencement of *scarlatina anginosa*—I shall make some observations on this subject, in the third volume.

DILATATION OF THE HEART.

Præternatural enlargements of the heart and great blood vessels appear to be more common than authors would lead us to suppose. In the course of the last two years, I have seen a considerable

190 DILATATION OF THE HEART.

siderable number; but at present I shall chiefly mention those which have terminated fatally. I have generally found them accompanied with dropsical swellings and much flatulence; frequently with a cough and spitting, almost always with œdema of the face. There is sometimes violent pain across the breast, attended with frequent deliquium; sometimes the pain is felt across the lower part of the abdomen; especially when a degree of inflammation has taken place in the heart. The progress of the disorder is very unequal. Sometimes the palpitation is so violent, that the patient seems ready to expire, yet in the course of a few hours, it will abate, and the patient will be able to walk out of doors, insomuch that the disease frequently seems to be in a retrograde state. A patient under my care, with a considerable dilatation of the heart, after having undergone violent pains across the thorax, succeeded

ceeded by fainting, is now, at the end of a year and half from the beginning, considerably easier, and has been for some time free from pain and deliquium. Lastly, death often happens suddenly, in such cases, without any rupture of the heart.

When the apex of the heart strikes very low, it always gives the impression of a much greater dilatation than actually exists. The stroke will be felt, for example, between the eighth and ninth, or the ninth and tenth ribs, when the ventricles are very little enlarged beyond their usual size. The most certain sign of dilatation, is the jarring sensation given to the hand, by each systole. The stroke seems restrained, and is succeeded by a kind of thrilling, which cannot be clearly described, but is entirely different from the shake of a palpitation. It is necessary to be very cautious in deciding whether

whether an enlargement exists, for I have known the common palpitation in chlorosis pronounced a dilatation of the heart, and the patient nearly destroyed by the consequent mode of treatment. The pulse is very irregular; sometimes feeble, small and intermitting; sometimes extremely quick and hard; or jarring, like the systole of the heart itself. When the palpitation is violent, the head is affected with strong distressing pulsations, which patients often compare to the strokes of a large hammer. I have sometimes found this palpitation in the head more uneasy, and more complained of, than that of the heart, even when the latter was evidently dilated. Fainting fits often attend this stage of the disorder.

These are the principal facts respecting this disease, which I have collected from my observations and dissections. I shall now illustrate them by cases.

William

William Cavanagh, aged nine, admitted in March, 1790, had complained for a month before, of violent palpitation of the heart, which had then become constant; of a troublesome cough, and frequent pain in the abdomen. His legs were anasarcous, and his face was bloated. His disorder began with a slight fever, which ceased about the fourth day. He had suffered a feverish attack, once a-year, for two or three years past, but never experienced the palpitation till the last accession. The stroke of the heart, when I saw him, could be distinctly felt between the ninth and tenth ribs. Every pulsation shook him strongly, and he was so much distressed, as to be unable to lie down, or to rest above a few minutes, in any other posture than leaning on a table breast-high, upon his forehead and elbows. His pulse was variable; sometimes quick, and rather full; sometimes low and

N hardly

hardly perceptible. He never complained of any pain in the chest. Under these complaints he struggled upwards of three weeks, growing worse from day to day, and at last expired without any agony, after having spit blood for a few hours. The pain in the abdomen had been very troublesome, for some days before his death.

On opening the body, the abdominal viscera appeared perfectly sound. In the thorax, the heart was not much enlarged, but extremely thickened; the pericardium adhered to it closely in its whole circumference, and indeed was almost become one substance with it. Adhesions, of uncommon thickness and strength, were also formed to the lungs and pleura, in every direction. One chord, about the thickness of a man's little finger, tied down the apex of the heart to the pleura, on the left process of the diaphragm. The lungs were sound.

This

This case might afford many reflections. The signs of extraordinary dilatation of the heart existed here, with little real increase in the size of that organ, while (excepting the cough*) no symptoms of carditis appeared, unless the pain in the abdomen ought to be reckoned such. The only circumstance that could give suspicion of the latter, was the quick progress of the apparent dilatation, yet in such an affection, there was no strong reason to suspect inflammation, at the distance of a month from its commencement. May we not, therefore, keep the probability of chronic inflammation in view, when the signs of dilatation are preceded by fever, or attended with febrile symptoms; when their progress is unusually rapid, without any obvious cause; when the pulse is often quick;

* Senac has explained the concomitancy of this symptom with diseases of the heart and pericardium, very judiciously. *Traité de Cœur*, tom II. p. 357.

when there is a troublesome cough ; and when there is much pain in the lower part of the abdomen, without any affection of the excretions? The following case will add force to the observation of the last symptom.

E. D. aged seventeen, had pains in her feet, which sometimes produced slight swelling and redness of the parts. The pains were very irregular ; sometimes in one, sometimes in both feet. When they ceased entirely, she felt great sickness, dejection of spirits, and a tendency to faint. She wasted daily ; the pains often shifted to her knees, and when violent there, the skin was tinged with a dark-green colour. At length she became comatose, but complained frequently of pain in the lower part of the abdomen. She died at the end of four months from the first attack. On dissection, the contents of the abdomen appeared entirely sound ;

but

but the pericardium adhered closely to the heart, in the whole of its compass, and the latter appeared thickened from inflammation. The next case may perhaps assist us in distinguishing, during life, the part of the heart affected with dilatation.*

John Rowbottom, already mentioned among the dropsical patients (history X.) some time after the second removal of his swellings, was attacked by a severe diarrhæa, which was removed

* Mr. Senac has adverted to this circumstance, but with full conviction of its obscurity: "Il est certain que les dilatations des
" diverses cavités (du cœur) peuvent être distinguées. En general
" les battemens du cœur ne sont pas violents quand le ventricule droit,
" ou le sac de ce ventricule, sont extrêmement dilatés; à peine les
" dilatations produisent elles des palpitations; dans beaucoup de cas,
" les malades, sentent seulement un grand poids dans la région du
" cœur."—"Les dilatations du ventricule droit & de son oreillette
" produisent toujours des battemens dans les veines du col—"
" L'absence de ces battemens, lorsqu'une dilatation du cœur est
" constatée, établit cette dilatation dans le ventricule gauche; mais
" ce ventricule dilaté se manifeste souvent par un autre signe; si les
" artères sont libres, leurs battemens sont extrêmement violents."
Traité de Cœur, tom. II. p. 327-8.

by opiates and astringents. He now complained that the palpitation was more troublesome, and that he felt it lower. No great difference, however, could be discovered by the hand; but the pulsation gave the impression of its being felt through a bladder almost full of water.* After the diarrhæa stopped, his swellings rose again, and were again removed from his legs by the use of digitalis. The abdomen did not decrease much under this last course, and after lingering in a complaining state, but not apparently worse, he died suddenly on Saturday morning November fifth. When the body was opened,† a great quantity of fat was

* Mr. Senac observes, that the fluctuation of water contained in the pericardium, may be distinctly felt, during violent palpitations, between the third, fourth, and fifth ribs. *Traité de Cœur*, p. 361.

† This dissection furnishes an exception to Mr. Senac's first rule for distinguishing dilatations of the sinus venosus. Indeed he does not seem to have attended sufficiently to the circumstances of the pericardium, one of which, adhesion or effusion, almost always accompanies dilatations, and affects the stroke of the heart in a particular manner.

observed,

observed, between the integuments and the muscles of the abdomen. There was much water within the peritoneum, and several large hydatids appeared in the lower part of the cavity. The liver was extremely enlarged, and scirrhus: at the first view of the viscera, it covered the stomach completely. Several irregular, white plates, of a cartilaginous nature, shewed themselves on the surface of the spleen, which was otherwise sound. The pancreas was somewhat indurated. The mesenteric glands were very much enlarged and hardened. On examining the external appearance of the intestines, marks of inflammation were very discernible; when part of the canal was opened, the villous coat was found inflamed to a considerable degree. This affection seemed to run through the whole. The kidneys were in a natural state.

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In the thorax, a great quantity of water was found, with some hydatids. The pericardium was quite full of water. The right auricle, and sinus venosus were enlarged to such a size, as almost to equal the ordinary bulk of the left ventricle. The left auricle, and both ventricles were nearly in the usual state. The lungs were sound, but small.

When the pulsation, in such cases, feels remote,* and extending across the breast, as well as downwards, and when the apex of the heart does not strike the ribs very forcibly, may we not conjecture, from this narration, one or both auricles to be affected, and prognosticate a less speedy termination of the disease? This case also proves the utility of employing diuretics, even where permanent læsions of the viscera exist. Rowbottom was emptied by me-

* Diemerbroeck has adverted to this circumstance.

dicine three times; his life was thus prolonged, and its duration rendered more tolerable. The power of digitalis over hydrothorax was not sensible, however, during the last course of that medicine.

No doubt, the quantity of water effused within the thorax, and the cavity of the pericardium itself, must have had a share in the peculiar impression given by the systole in this case; but from the long intervals of relief afforded, I cannot suppose the effusion to have been in equal quantity, at every period of my attendance. An attention to this circumstance is of great importance in practice, because much relief may be administered by a proper exhibition of diuretics, when there is reason to suspect the presence of water in the pericardium. It is on this supposition that I account for the relief experienced by Rowbottom, and the following case will place it in a stronger point of view.

James

James Hamilton, aged eleven, came under my care about the beginning of December, 1791. He was affected with a constant palpitation of the heart, which had begun in the preceding May, and now prevented him from lying down, or from resting in any other position than that of leaning on his elbows. The stroke of the heart was perceivable almost under the false ribs, and extended across the thorax, but was most forcible a little below the natural place, between the fifth and sixth ribs, rather obliquely, however, than directly. The stroke was soft, but vibrating, distant, and somewhat undulating. His legs were swelled slightly, and his urine was rather less than natural. He had a very troublesome cough, accompanied with little expectoration, and heaved strongly in respiration. His face was pale and emaciated. The pulses in his different wrists were not synchronous, either with the heart or with each

each other. From these circumstances, there was reason to suspect water in the thorax, and particularly in the pericardium. I put him on a course of spiritus ætheris vitriolici, with small doses of laudanum. In a short time he began to discharge more urine, and the palpitation was sensibly relieved. He was then able to lie down, and to sleep on either side without disturbance. The swellings of his legs likewise disappeared. At the end of a few weeks, he was tolerably free from uneasiness, and his cough began to leave him. The stroke of the heart was now more circumscribed, and felt firmer, though still of the aneurismal kind, and he was sensible that it was higher in his chest. About this time, a complaint in his stomach occasioned the omission of the diuretic, for a few days. During this interval the palpitation again increased, and his legs swelled. After clearing his bowels, however, the symptoms were

were again relieved, by resuming the diuretic course. In the course of my inquiries, I found that before he came under my care, he had been attended by another physician, who, among other pectoral medicines, had ordered him squills. An increase of urine was the consequence, and temporary relief was obtained. He is at present tolerably easy and cheerful, and the disorder does not seem to make much progress. Digitalis may prove very useful in similar cases, by lessening the impetus of circulation, as well as by promoting the flow of urine, and thus contributing doubly to relieve the patient's distress. We can expect little more than to sooth, and perhaps to prolong existence in such cases.*

* Baglivi says, with his customary good sense, "in morbis pectoris, semper ducendum esse ad vias urinæ:" De Asthmate.—Probably, the great efficacy of squills, in disorders of the breast, has been often owing to the unnoticed action of the remedy as a diuretic. It is remarkable that Baglivi orders the *julepum tabaci* in asthmatic cases.

Palpitations are often so severe, as to excite suspicions of enlargement of the heart without reason. It appears, both from Cavanagh and Rowbottom's case, that the apex of the heart may strike very low, although the ventricles be not dilated. And I have found the most terrible palpitations yield to anti-spasmodics or tonics, used according to the patient's general habit, and to the attending symptoms.

E. H. aged eleven, belonged to an unfortunate family, which was reduced to pass the winter of 1789 in a cold, damp cellar, without beds, and very thinly clothed. They slept on tattered pieces of carpet, covered with a little straw. A fever soon rose among them, but it was this girl's lot to be seized with a violent palpitation of the heart. Every stroke of the pulsation raised up her clothes, so as to be visible at some distance, but the apex of the heart was
felt

felt nearly in the usual place. She took tincture of castor, in doses of thirty drops, three or four times a-day; and this, with attention to her clothing and diet, subdued the palpitation, in the course of a few weeks.

But if we are liable to deception from the violence of such signs, there are other cases, in which the symptoms of dilatation are very trifling, and extremely obscure. Some symptoms appear, but they are misunderstood or neglected; the patient appears better, or at least no worse; and hopes of recovery are given. In the height of this security, the fatal stroke arrives: every one is astonished; and an event which ought to have been foreseen and foretold, passes for sudden death. In the following case, the symptoms of two fatal diseases, both exhibiting themselves under slight appearances, were combined. It will serve as an example of

of the treacherous calmness, with which disorders both of the heart and liver sometimes proceed.

Margaret Ellis, aged twenty-three, was first admitted an out-patient, on account of amenorrhæa, which was then her principal complaint. She had sometimes swellings of her ankles towards evening. After some time, she complained of a cough, and uneasy palpitation of the heart. She was then made an in-patient, about the middle of April, 1791. In addition to her former complaints, she had now pain in the region of the liver, difficulty of breathing, and a quick pulse. Her face was bloated, and had a purple cast. She took soluble tartar in laxative doses, but grew worse, and died suddenly one evening, just after appearing more cheerful and easier than usual. On opening the body, the liver bore marks of chronic inflammation on the whole
of

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of its surface; the other abdominal viscera were sound. The thorax was full of water; the lungs were considerably diseased. The heart was much enlarged, and quite full of blood, in all its cavities.*

The duration of complaints of this kind is very various. Even when dilatations of the heart can be ascertained by the progressive descent of the apex, long intervals are sometimes indulged, during which the patient can use moderate exercise with tolerable ease. In other cases, the disorder begins, and terminates fatally, in the course of two or three months. The length of the complaint has varied, within my own observation, from a quarter of a year to nine years. There is likewise much difference in the sufferings of the patients. Sometimes, as was Cavanagh's

* See observations by Senac on this subject, tom. II. p. 415.

case,

case, it is dreadful to witness them; in other instances, like that of Ellis, the palpitation is only occasionally troublesome, and is easily borne in general. All the persons who have come under my care in this distemper, have been young. Of eight cases, which I have seen within the last two years, none of the patients were above thirty years of age. Some were under ten. A man about twenty-five years old, who consulted me seven years ago, had a dilatation of the heart, brought on by hard drinking, which killed him in the course of twelve months. In other cases, I have found the disease occasioned by raising great weights, or by too long a continuance of much bodily exertion. Frequently no particular cause can be assigned for its commencement. It sometimes appears after slight feverish attacks. I have met with two instances of this kind. But in such cases, either a slight degree

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of

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of inflammation must be supposed to have affected the heart, or an original weakness of the organ must have given a predisposition to the complaint. It is well known, that enlargements of the heart are frequently observed, in patients who die of typhus. In irritable habits, and young subjects, therefore, an irregularity in the circulation, however produced, whether by fever, or, as in Ellis, by the suppression of a constitutional discharge, may create the first tendency to this complaint. In chlorosis, such a tendency is always remarkable; and the successful treatment of that disorder, by the most invigorating tonics, may suggest a doubt, respecting the propriety of treating all incipient dilatations of the heart by evacuation. In other partial congestions, and in palsies, tonics, and even direct stimulants are given with advantage, to recover the tone of the dilated or ruptured vessels. And the

the tendency to deliquium, the weak, flatulent state of the stomach and bowels, the dropsical symptoms, owing to a delay in the return of the blood, and the languid feelings of the patient, in the *first stage* of the complaint, seem to point out a careful exhibition of tonics, as a probable method of prevention.* Even at a very advanced period, one of my patients indulged himself in the use of wine, contrary to my directions, and thought himself relieved by it; and Rowbottom, towards the close of his disorder, took four ounces of wine daily, with evident benefit. Great attention must undoubtedly be paid, in determining on such a plan, to the sex, the age, the peculiar habit and circumstances of the patient. For no case can be supposed, in which the method adopted tends more immediately to suppress, or en-

* I observe that Mr. Senac recommends the use of chalybeate waters, in beginning dilatations. *Traité du Cœur. tom. II. p. 330.*

courage the disease. When the dilatation has proceeded to a considerable degree, indeed, direct stimulants are generally improper, but when great languor and debility attend, they are sometimes admissible as palliatives. Indeed I apprehend, that no exclusive rule of practice can be formed in this disorder, which will not be found often useless, and sometimes prejudicial.

I shall only add, as a farther caution, that I have found a pain extending across the breast very troublesome, in conjunction with flatulence and violent palpitations, and I have seen medical men disposed to treat it as a symptom of inflammation or dilatation. But a close attention has convinced me, that it was owing to a spasmodic affection of the œsophagus; and it has been removed accordingly, by the exhibition of tonics and antispasmodics. I suspect that this symptom has sometimes been described as a case of angina pectoris.

MURIATED

MURIATED BARYTES.

The high character with which this medicine was ushered into practice, induced me to order it in several scrophulous cases. It is needless to give a particular account of my observations, for I have never found any sensible effect from it, even in doses of twenty drops, given twice or thrice a-day; excepting in two cases. There could be no doubt respecting the preparation of the specimen I used, as it was a saturated solution, made by Mr. Cooper and Mr. Watt; and I was always attentive to its being given in distilled water. In the two instances where it appeared to do service, the good effect was not very remarkable. I cannot help suspecting, that the only benefit to be

fluorine O 3 expected

expected from it, must arise from the action of the acid, either not completely saturated, or not destroyed as a tonic, by the mineral. Several patients, whom I now attend for scrophulous complaints, are taking the acid alone with apparent benefit, who had used the muriated barytes, without experiencing the smallest alteration in their health.

REMEDIES OF INSANITY.

It is very difficult to describe complaints of this kind; and expectation is disappointed in the event so frequently, that practitioners are easily discouraged from attempting improvements in the method of cure. Books are so defective, on this subject, that analogy must be the principal guide, in counteracting these dreadful affections, as they resemble, more or less strongly, nervous

nervous and hypochondriacal complaints. I have used the different methods recommended by the few good writers on insanity whom we possess, and have joined those employed by physicians now eminent for the cure of such distempers. Some of my observations follow.

1. *Tartar emetic.* The exhibition of this medicine, in nauseating doses, is a favourite method at present, in maniacal cases. I have used it in six cases, in two of which the patients were extremely furious, and have found it of little efficacy, excepting in one instance. It was that of a robust woman, about twenty-five years of age, who had been insane a few years before, and had now relapsed into a state of furious mania. Her tongue was foul, and her pulse quick. She took emetic tartar, in sufficient doses to support a constant slight nausea, and had a blister

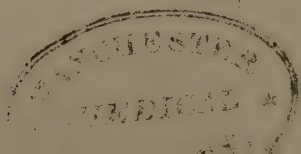
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applied, about the same time, to the crown of her head. In a day or two, she appeared rather more composed, and as she found farther relief from the continuance of the medicine, it was given for a week together. At the end of that time, she was sensibly calmer, though there was yet no appearance of recovery. I then dropped the medicine, put her on a course of whey, and on low diet, and kept her bowels freely open with magnesia. This method was continued for fifteen days. She was then ordered, in addition, an opiate every night, at bed-time, and was occasionally purged with black hellebore. Signs of recovery began to appear, under this method; she became dull, and at last tractable and quiet. Her reason returned gradually, and after being completely rational for more than a month, she was discharged cured, at the end of four months from the time of her admission.

2. *Camphor.*

2. *Camphor*. This remedy has been strongly recommended in cases of insanity. I wish I could add my testimony in its favour, but I have found it totally useless in these disorders, in all kinds of doses. I have given it with great attention in eight cases without any advantage. T. R. about twenty-eight years of age, a strong active man, formerly addicted to debauchery of every kind, came under my care, about a year ago. He was in a state of the highest fury, slept none, and raved without intermission. I gave him fifteen grains of camphor, with two grains of opium, and finding that produce no effect, added eight or ten grains of musk. As the mania did not lessen, I went on, till he took two drachms of camphor, a scruple of musk, and eight grains of opium, a-day. This quantity did not produce sleep, nor make the smallest impression on the disease; I therefore discontinued it, and had recourse to,

3. *Opium*.



3. *Opium alone.* The favourable account of the effects of opium alone, given in large quantities, which BERNARD HEUTE has produced, in the appendix to Wepfer's *Historiæ Apoplecticorum*, induced me to try it with this patient. Accordingly, the anodyne solution, prepared in Dr. Heute's manner, was given as he directs, till we reached the quantity of sixteen grains of solid opium in the day. The patient was not at all better, however, and I had recourse to other means. I have tried the power of opium alone, in several other cases, though not to an equal extent, but with no sensible benefit to the patient.

4. *Digitalis.* Since this remedy became fashionable, it has been sometimes employed with success, in cases of melancholy. The sympathy often observed between the kidneys and the brain, has induced practitioners to use
diuretics

diuretics for the removal of insanity, and they are said often to do service. When a medicine, like digitalis, unites strong diuretic to narcotic powers, considerable advantage may therefore be expected from it. I have, accordingly, given this remedy even to nauseating doses, but with no advantage. It never suspended the appearances of insanity for a moment. That other diuretics may be useful, I have no doubt, for I have found the infusum diureticum of the former dispensatory, (a cold infusion of salt of tartar, and wormwood ashes) give some relief.

5. *Antiphlogistic regimen.* Many of the patients, received into our lunatic hospital, bring on their disorder by hard drinking. In such cases, low diet, and saline purgatives generally restore health in a moderate length of time. Under such circumstances, any attempt to suppress the disease suddenly,

denly, I apprehend, would be unsafe. Perhaps maniacal paroxysms have something like a period, and ought to be considered as an acute state of the disease. I have used antimonials in them, however, without success.

6. *Bark with opium.* In cases of deep melancholy, where there was evidently a relaxed state of the solids, and in maniacal paroxysms, where the appearances resembled those of the low delirium in fevers, I have employed the bark, combined with opium and aromatics, with the best effects. I shall give one case, as an example of this method of treatment.

A. W. aged sixty, admitted August 30, 1791, laboured under a total alienation of mind. Her aspect was extremely dejected; her skin yellow; she often groaned and wept, and was perpetually muttering to herself. Her pulse

pulse was low and languid. She was ordered two drachms of the electuarum peruvianum, and two grains of opium, morning and evening. For some days, little alteration was perceivable, but about the twelfth of September, she was well enough to be allowed the liberty of the gallery, unbound. As she now slept well, I did not think it necessary to increase the quantity of opium, and she went on as usual. At the beginning of October, her reason had returned in a very great degree. Her legs now began to swell, but were soon reduced, by rubbing them with flour of mustard. She recovered gradually but steadily, and was dismissed perfectly well, on the twenty-ninth of October.

7. *Bathing.* The repeated use of bathing, either warm or cold, is strongly recommended by the best writers. In cases of melancholy, I commonly

commonly use the latter, in mania the former. If a maniac be continued in the warm bath for a considerable time, he will become entirely passive. Immersion for half an hour, exempting the head, of course, commonly produces this effect. T. R. the commencement of whose case I have given before, continued in a furious state, notwithstanding the different methods tried with him. I then determined to make him use the warm bath, for half an hour at a time, every other morning. I was induced to try this practice, by the praises bestowed on it, in Pomme's *Traité des affections Vaporeuses*, where he declares that he has kept patients with hysterical mania, in the warm bath, from ten, to twenty-four hours together. It required five or six men to carry our patient into the bath, but its relaxing effect was so great, that one person returned him to his bed, with as much ease as if he had
been

been a child. His limbs became entirely pliant, and he lay in a sort of comatose state, for some time after being put to bed again. Upon recovering from this degree of torpor, he was calm, and more rational. The crown of his head was also shaved, and a sponge filled with cold water was laid on it for a considerable time every day, changing the water as it lost its coolness. The bathing was continued, till the tenth of November, when his fury had completely subsided, and he fell into the harmless, stupid state, which usually succeeds maniacal paroxysms. He was soon allowed to walk in the gallery, and continued to recover his reason, by very slow degrees, till the beginning of March, when the only remains of his insanity consisted in a remarkable degree of sluggishness. He had been using tonics, moderate doses of opium and camphor, and occasionally, black hellebore

bore as a purgative. I now ordered him to be electrified every day, which roused him considerably, and produced a rapid change. I kept him nearly two months in the house, after he became apparently well, to ascertain the permanence of his recovery, and he was dismissed, cured, on the fifth of May.

8. *Drains.* Melancholy and mania are sometimes produced by the suppression of habitual eruptions, or discharges, and sometimes cured by restoring, or imitating them. A few years ago, I was consulted by the friends of a young gentleman, who had fallen into a melancholy state. I found, in the course of my inquiries, that he had been subject, in spring, for several years, to an eruption of the herpetic kind, about the back part of his neck, extending to his right shoulder; and that on its failing to appear, he had once before become melancholy. It

was

was deficient at the time of my seeing him. I immediately ordered a seton to be passed at the nape of the neck. No change was observed, till it began to discharge. But when suppuration took place, at the end of three or four days, a very foetid matter began to come away, and the patient was evidently better. His mind became every day more and more confirmed, and with the assistance of exercise, sea-bathing, and a tonic regimen, he soon recovered completely.

L. H. aged forty-eight, admitted July 16, 1791, was in a very low, desponding state, and fancied she had destroyed part of her family. I put her on a course of camphor and opium, interposing the cold bath, and occasional purgatives; but she did not begin to recover, till the beginning of September, when I ordered a seton to be put in the nape of her neck. As

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soon

soon as it began to suppurate, she was sensibly better; she afterwards improved daily, and was discharged perfectly well, in October. Blisters generally answer very well, when patients are not sufficiently tractable, to submit to drains that require more management. But sometimes it is not sufficient to excite simple ulceration on the surface, for when a peculiar eruption has been suppressed, it may become necessary to renew it in a specific manner. I was informed, some years ago, of a case of epilepsy, brought on by the retrocession of the itch (in consequence of some external applications) which resisted all the usual remedies, and became more and more violent. The gentleman who told me the case, proposed to inoculate the patient for the itch. His expedient was adopted, and a plentiful crop of the eruption produced, which freed the patient at once from his fits. The cutaneous disease

disease was afterwards cured, with proper caution, and the patient restored to perfect health.

A peculiar affection of the skin frequently appears to usher in maniacal paroxysms, and sometimes to attend them throughout. The state of circulation on the surface, therefore, has always been an object of importance to me, and though I have sometimes failed in altering its morbid condition, yet I think it an indication never to be neglected. When critical eruptions do appear, in complaints of this nature, they give immediate relief.

I have sometimes been able to predict the return of maniacal fits, by observing a peculiar constriction of the skin of the forehead, attended with a slight leaden tinge; the patient's features commonly appear somewhat sharper than usual, at the same time.

9. *Bleeding, and topical evacuations.* General blood-letting is a valuable remedy in young plethoric subjects, when the patient is not totally unmanageable. But in the frantic state, when almost every muscle is in violent action, it would be very difficult to perform it, and very dangerous to trust the wounded vessel to any bandage. Repeated bleeding, though so strongly recommended by Sydenham, would, I am persuaded be hazardous; for I have often had occasion to remark, that the strength of a maniac is easily, and sometimes suddenly reduced, by evacuating remedies. I have known a single vomit, by emetic tartar, bring on a dangerous degree of debility, in consequence of a brisk, but not uncommon evacuation. The action of cupping, leeches, and blisters is attended with no danger, and may almost always be made to answer the purposes of general blood-letting. And in all cases, it is a necessary caution,
that

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that while maniacs bear large doses of opium and other sedatives with impunity, we must not reckon on their supporting remedies, which directly weaken the moving powers, in an equal proportion.

LINIMENT FOR THE LUMBAGO.

Since the publication of Dr. Home's prescription of a camphorated liniment, in this disorder, I have used his formula, or one nearly resembling it, in several cases, with success.

Mr. C——, in consequence of exposure to cold, complained of severe pain in the region of the loins, which obliged him to sit almost double. It had continued about a week, when I saw him. I ordered the camphorated

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liniment to be applied: his pain was relieved next day, and at the end of three days was entirely removed.

Mr. ———, after a fall from horse-back, was seized with acute pain at the upper part of the os sacrum, which affected his walking, and distressed him greatly on sitting down or rising up. After suffering it near a fortnight, and finding it rather increase than lessen, he applied to me. I directed the application of the liniment, which relieved him considerably in the course of a few hours. In less than forty-eight hours, he was completely free from pain, and suffered no relapse.

William Shipton, aged thirty-four, was admitted November 23, 1791, with sciatica and Lumbago, to a very considerable degree. He had been ill for several weeks. I ordered the camphorated liniment to be applied to his
back

back, and an issue to be opened by an escharotic, on the outside of the thigh, near the great trochanter. His back was much easier, in two days, and the plaster was renewed. In less than a fortnight, the lumbago was entirely removed, by repeated applications of the plaster, and he was discharged free from complaint, on the nineteenth of December.

I have employed this remedy in many other cases of lumbago, both in private and hospital practice, with success. The form which I have generally used in the latter is, two drachms of camphor, an ounce of basilicon, and half an ounce of black soap. It commonly removes the pain within three days, often in a much shorter time. I now add, with evident benefit, a scruple of the flour of mustard to this composition. I continue to find it very generally successful.

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The powers of camphor, externally applied, especially when dissolved in a spirituous menstruum, appear to be very great. In a painful affection of the joints, of seven years standing, accompanied with exostoses of the internal condyle of each os femoris, and extreme stiffness of the articulations, I have found a solution of camphor in vitriolic æther suspend the patient's sufferings, after all other applications had failed. And in the case of a gentleman, threatened with a white swelling, the pain, which was very acute, was always taken off for three hours, after the use of the same composition.

EFFECTS

EFFECTS OF DIGITALIS

IN ACTIVE HÆMORRHAGE.

The remarkable operation of digitalis, in retarding the pulse, has naturally suggested its use in cases of active hæmorrhage. It appears to be particularly indicated, where a tendency to relapse is preserved, after the usual methods of checking the evacuation have been carried as far as prudence, and the strength of the patient will justify. I have only tried it in the following cases.

1. John Fitton, aged forty-six, about six weeks before his admission, had overstrained himself in dragging a fish-pond. The consequence was, a spit-ting

ting of blood, which did not proceed to excess at any one time, but returned once in four or five days, upon very slight exertions. His pulse was hurried, irregular, and somewhat sharp; about ninety-five. He was inclined to costiveness. I ordered him nitre with conserve of roses, and occasional laxatives; enjoining him rest, a low diet, and the use of cold liquids. The hæmorrhage returned, however, two or three times in the course of a fortnight. I then brought him into the house, and gave him the infusum digitalis, in increasing doses. He began with one table spoonful in the day, and went as far as six without inconvenience. In three or four days, his pulse was sensibly slower, and more regular, but his cough was troublesome, for which he was ordered a linctus. He remained a fortnight in the house, without any return of the hæmorrhage, and was dismissed, apparently in perfect health,

near

near two months ago. I have not heard that the hæmorrhage has recurred.

2. John Walsh, aged twenty-two, was admitted, November 28, 1791. He had been subject to frequent returns of spitting of blood during four months, whenever he used exertion. He had also a tickling cough. His pulse was quick, but rather irregular. He took the *infusum digitalis*, in the same manner with the preceding patient, but never exceeded four table spoonfuls a-day. By the use of this remedy, the tendency to renew the disorder ceased, and he was entirely free from hæmorrhage, in the end of December.

3. ——— Higgins, aged twenty-eight, admitted December twelfth, had been seized with a spitting of blood more than a year before. He had lost a leg.
The

The hæmorrhage returned frequently, but never in a violent degree. He was seldom free from it above two days together. The *infusum digitalis* was ordered, in increasing doses. His pulse was oppressed, but not strong; upwards of ninety in a minute, and irregular. On the twenty-sixth of December, he had taken three table spoonfuls of his infusion a-day, without inconvenience, and had been free from hæmoptœ for a week. His pulse was more free and regular, and about eighty. The dose was ordered to be increased, and he continued to use the medicine till the middle of January, when he was discharged, cured.

4. James Sharples, aged twenty-three, admitted December nineteenth, was attacked by a spitting of blood three days before. He complained of tightness in his breast, heat, and of a tickling previous to the discharge of blood.

blood. His pulse was quick, and rather full. I ordered him to lose twelve ounces of blood, and afterwards to take the *infusum digitalis*, with the usual precautions. On the twenty-fourth, the spitting returned in a slight degree, occasioned by his being very costive, but ceased on procuring him a stool, by means of *oleum ricini*. He was then taking a spoonful of the infusion four times a-day. On the twenty-fifth, he was free from hæmoptœ; but his skin was hot and moist, his pulse considerably above an hundred, and his breathing quick. I therefore directed the dose to be increased, and enjoined a strict observance of the antiphlogistic regimen. On the twenty-sixth, his pulse was between eighty and ninety; on the twenty-eighth, it was about eighty-six, and he had experienced no return of hæmorrhage. He was again costive, and griped. Three stools were procured by a
dose

dose of oleum ricini. On the thirtieth, he complained of sickness; he was then taking six spoonfuls of the infusion a-day. He had been free from the hæmorrhage for a week. His pulse was under eighty, and much calmer. I therefore desired him to lessen the dose of the infusion. On the thirty-first, the sickness had ceased; there was no hæmorrhage; his pulse was about seventy, and inclined to intermit. His cough was still troublesome. The dose of the infusion was then reduced to two spoonfuls a-day. His cough continued, but was less troublesome, on the fifteenth of January.

All these cases of hæmoptœ occurred to me, after the setting in of the hard frost, in December, 1791.

HYDROPHOBIA.

I have only met with one case of this disease. An account of it was published in the first volume of the Medical Facts and Observations, containing little more than a simple narration of the facts. I have thought, that the importance of the subject required its insertion here, with some additional remarks.

John Johnson, a labouring man, while he was at work in a by-street, some time in July or August, 1790, was slightly wounded in the left cheek, by a strange dog, which snatched at his face in passing. He suffered the
animal

animal to pass unregarded, and thought no more of the accident. The bite healed very quickly. In the succeeding October or November, he was attacked by stitches in the breast and sides, and a severe cough, which were all removed by the usual remedies. I could obtain no accurate information respecting these dates. In the end of November, 1790, his pneumonic complaints returned; he was then twice bled, and had two blisters applied, with considerable relief. On Monday evening, November twenty-ninth, he was persuaded to drink some warm gin and water, before going to bed. His wife observed that he took it with reluctance and apparent difficulty, and on inquiry, found that his attempts to swallow it gave him great uneasiness. This symptom increased very fast, and soon became the principal complaint; but during all this time, the circumstance of the bite was not recollected either

either by the patient or his wife; nor did any suspicion of the true nature of the complaint occur to them. On Thursday evening (the fourth day) a neighbour mentioned the poor man's situation to a medical gentleman, and particularly dwelt on his aversion to liquids. This produced an inquiry whether he had been bitten by a dog of suspicious appearance. It was some time before Johnson could remember that he had received a slight bite, but the recollection alarmed him; and a recommendation to the infirmary was procured, in consequence of which, I saw him on Friday morning (fifth day).

I found him feeble, affected with tremors, and extremely irritable. His eyes were wild, yet fearful, and he turned with great quickness, towards the slightest noise. His discourse was faltering and somewhat incoherent, and his manner timid and suspicious.

Q

He

He was unwilling to own his aversion to water, and was desirous to be told, that the dog was probably not mad. His pulse was weak and irregular; his tongue white; his evacuations were natural.

When I desired him to drink a little water, he shewed strong marks of disgust, but with some encouragement, was prevailed on to make an effort. As soon as he took hold of the cup, I perceived some spasmodic contractions of the muscles of deglutition; when he raised it towards his mouth, the muscles on the cheeks were strongly contracted, and a sort of convulsive gulping came on. He threw some of the water into his mouth, in a great hurry, but it was returned at first; a small quantity at last got down, with a violent struggle on the part of the patient, who extended his arms, and clenched his hands, while it was passing.

ing. Deglutition was attended also with considerable, irregular noise in the œsophagus. The admission of cold air into the room gave him similar uneasiness. When the outer door was opened, he immediately put up his hand to the anterior part of the throat. When asked where the impression was felt, he pointed to his throat, immediately under the thyroid cartilage. He always swallowed solids with great ease.

The scar on his cheek, which was between the ear and the angle of the jaw, but rather more advanced, was hardly discernible. He felt no kind of uneasiness in it, and there was no discoloration. His wife remembered to have seen it bloody. He was about thirty-nine years of age, and had been very sober and industrious. I sent him to the infirmary immediately, and ordered him to take a bolus, containing

Q 2 *Hydrophobia* scruple.

a scruple of bark, six grains of musk, and half a grain of opium. He was immersed in the cold bath, and was urged to swallow, as often as possible, a draught of vinegar and water. I was informed that the sound of water distressed him, and being desirous of ascertaining the fact, I directed a large jar to be emptied in the adjoining passage. He was evidently alarmed, and begged to be sent home, but would not acknowledge that he was afraid of water.

At five o'clock in the afternoon, we met in consultation, when the horror of water, and difficulty of swallowing liquids, were ascertained in presence of all the physicians to the house. It was now late in the fifth day of the disease, and the patient was evidently much enfeebled. We had therefore nothing to expect from medicine, but it seemed right to attempt whatever the situation of our patient could justify.

We

We agreed to scarify the cicatrix on the cheek deeply, and to apply a blister over the incisions; a bolus, containing a scruple of bark, fifteen grains of musk, and two grains of opium, was directed to be given every four hours; two drachms of strong mercurial ointment were rubbed in upon the throat, arms and groins; a mixture of eight ounces of distilled vinegar, and twelve ounces of decoction of bark, was ordered, of which three or four table spoonfuls were to be given as frequently as possible; and a poultice, consisting of three drachms of galbanum, two scruples of opium, and one drachm of camphor, was applied, after the mercurial friction, to the throat.

About nine o'clock, the same evening, I saw him again. He had swallowed his medicines without much reluctance, but was incoherent, and complained greatly of cold.

Q 3

during

During the night, his delirium increased; he was restless, impatient and intractable. He had never shewed any disposition to injure the people about him, but he now threw himself out of bed, and resisted the keeper who attempted to replace him, so that it was necessary to apply the strait waistcoat. However, he took four boluses, and swallowed more than a pint of his mixture. He had one stool before morning.

At nine o'clock on Saturday morning, the sixth day, we met again in consultation. We found that his difficulty in swallowing liquids was less; he had taken some very thin porridge, the usual breakfast of the house; and he drank several mouthfuls of his mixture in our presence, without any striking appearance of disgust. But his eyes were heavy and inclined to fix; his pulse was much sunk; and there

was

was a constant tendency to low delirium. We therefore concluded that the termination of the disease was near; but agreed that the method we had adopted should be pursued, while he was capable of swallowing. Before I left him, he retched several times, and brought up some wind: half a grain of emetic tartar was directed to be added to his next bolus, but he did not live to take it. At a quarter past ten he swallowed some of his mixture, and immediately after threw up part of it again. He then fell into convulsions, and died in the course of a few minutes.

I was very desirous to have the body examined as early as possible, that the appearances attending this dreadful disorder might be fairly ascertained; the inflammation of the stomach, described in former dissections, having been often attributed to the action of

the gastric juice. Accordingly, the body was opened by Mr. Simmons, at a quarter before three o'clock, on Saturday afternoon, in presence of most of the physicians and surgeons to the hospital.

In the brain, the only præternatural appearance was, a distention of the pia mater, on the surface of both hemispheres, with a limpid fluid. The quantity of fluid in the lateral ventricles, at the basis of the brain, and round the spinal marrow, appeared to be somewhat unusual.

In the thorax, the lungs were uncommonly sound, excepting one slight adhesion at the posterior part of the left lobe. The trachea was perfectly sound. The pericardium adhered pretty firmly to the heart, in its whole compass.

In

In the abdomen, the stomach and intestines seemed, externally, sound; but on opening the lower part of the œsophagus, a morbid appearance presented itself. About two inches above the cardia, the epidermis of the œsophagus was abraded in irregular points, and exposed an inflamed surface of a dark red colour; still lower, the abrasions became linear, and extended into the stomach itself. The edges of the epidermis, surrounding the abrasions, were unequal and elevated. A similar affection was traced along the lesser curvature of the stomach, but growing fainter in its progress, to the pylorus, where it was least discernible, and about which it seemed to terminate. The whole of the inflamed parts bore a striated appearance, resembling the effect of corrosion, darkest in the œsophagus, and lighter and more indistinct towards the pylorus. The stomach was half full of a dark-coloured fluid, which smelt strongly

strongly of musk. The other viscera were in a natural state.

The length of time which intervened, in this case, between the bite and the appearance of the disorder, was nearly the space usually observed. As almost every circumstance of so dreadful, and so intractable a disease is regarded with wonder, this interval has always been marked as a striking peculiarity. It is well known, however, that the action of morbid contagion on the system is always delayed for a certain time after its introduction. In the infection of fevers, the interval often consists of many days, and has even been said to have extended to three weeks. The venereal poison, applied to the urethra, has been known to produce a gonorrhœa, after an interval of a fortnight; and some days always elapse before it exerts that action. The fact respecting hydrophobia

is

is therefore not singular in its nature, although the duration of the interval is unusually long.

As the principal morbid appearance in this body, was a peculiar inflammation of part of the stomach and oesophagus, not sufficient to account for the death of the patient, I apprehend that we must still consider hydrophobia, as a nervous disease, of unknown nature. I believe we may fairly consider the appearances I have described, as the proper effects of the disease, since four hours and a half only elapsed, between the death of the patient and the dissection; especially as the stomach contained a considerable quantity of fluid. It is evident that such a state of the oesophagus, joined to an increased irritability of the system, affords an easy explanation of the peculiar sensibility to cold water and cold air. But the general disorder has been known to exist

exist without this remarkable symptom;* the dread of water, therefore, which has been always considered as constituting the diagnosis, is in reality only the symptom of a symptom. It must be observed, however, that in Dr. Vaughan's two cases of hydrophobia, though the dread of water had been felt by both his patients, no inflammation of the œsophagus or stomach appeared on the dissection of either. Indeed the case before us shews, that the terror of water does not originate from the local inflammation alone, for the patient was able to swallow liquids for some hours before death, though the inflammation was certainly existing, and perhaps proceeding at that time. The cessation of this symptom a short time before death, which has been observed in some other cases,

* Mead on the Bite of the Mad Dog. Lieutaud, *Precis de la Médecine pratique*, Art, *Hydrophobia*.

is therefore probably owing to the decrease of irritability. The ease with which solids were swallowed by this patient, admits an obvious explanation. In the diseased state of the œsophagus, the comparatively small degree of contraction, necessary for the descent of animal food, is performed without difficulty. For the deglutition of liquids, a very strict contraction is required, which strains and irritates the inflamed parts, and consequently occasions great distress.

In the total want of discriminating characters of the general affection in hydrophobia, it is no wonder that recourse has been had to analogy; though the fallacy of that method is remarkable in nothing more than in pathological discussions. The close resemblance between this disorder, and some cases of tetanus, has been fully established by Dr. Percival and Dr. Rush, and perhaps this important parallel includes the

the principles, on which hydrophobia may at some future period be treated with success. The facts now ascertained, of this disorder arising sporadically, and of its having proved a consequence of simple wounds, or other injuries done to the extremities, without the intervention of any virus, while they prove that hydrophobia is not always the effect of a specific poison, afford room to hope that it may yet be cured, without the discovery of a specific antidote.*

The prevention of hydrophobia, I apprehend, is only to be expected from the immediate destruction of the bitten part. This may be effected, either by excision, or by exploding with gunpowder. Perhaps it would be better, afterwards, to promote the ulceration of the surrounding parts, by cantha-

* On these points my sentiments are now considerably altered.
See Vol. 3, Art. Hydrophobia.

rides, than by the usual method of caustic. The action of the latter may be too slow to answer the purpose. That the exhibition of internal remedies, or the use of simple external applications, should have been supposed to prevent the accession of hydrophobia, can excite no surprise, when it is considered, that a small proportion only of persons really bitten by a mad animal, is liable to suffer the disorder,* even when the bite is effectually inflicted, with the infusion of the saliva; that many circumstances may attend the effort to wound, which may obviate its danger; and that the madness of the animal is too frequently left a subject of conjecture.

When the disorder is ascertained, very opposite methods of cure, supposed to have been successful at different times, offer themselves to the mind of the

* See Dr. Fothergill's Case of Hydrophobia, p. 23.

practitioner.

practitioner. On one hand, large and repeated bleedings, succeeded by considerable doses of musk and opium on the other, mercurial frictions and the warm bath; while the probable analogy between this disease and tetanus, impresses the advantages of cold bathing, and the most powerful tonics.

In different seasons and countries, the degree of inflammatory tendency, in hydrophobia, may be very different; but as a state of extreme irritability always seems to accompany its advanced stage, I should conceive blood-letting, at least when repeatedly used, to be a very doubtful remedy. In my patient, it was prohibited by the state of the pulse, the advanced period of the disease, and the free use which had been previously made of it.

Opium affords a less equivocal assistance, and is indeed strongly indicated in

in the confirmed state of hydrophobia. The analogy of tetanus appears to encourage expectation from this remedy; but in a disease which, like hydrophobia, exhausts the powers of life so quickly, opium cannot, perhaps, be safely given to an equal extent. It may probably do most service, in combination with a tonic course.

The large use of mercurial frictions is said to have proved successful, in this disorder. This method was perhaps originally suggested, by the determination to the salivary glands, so remarkable in the course of the complaint. If sufficient time were granted for the action of the mercury, I should have great doubts respecting its operation. Why should irritation so powerful be added, in a state where excessive irritability is the principal complaint? The tendency to inflammation in the

R stomach

stomach and œsophagus, appears also to contra-indicate the use of mercury.

The use of the warm bath was found to give great relief, in the case related by Dr. Fothergill. Perhaps, when the inflammatory symptoms run high, and when rigid spasms take place, a long-continued immersion in the warm bath may, as in other spasmodic disorders, prove beneficial.

But if the analogy traced between hydrophobia and tetanus may be trusted, we must in general expect the cure of this disorder from the free employment of bark and cold bathing, joined with an ample, but judicious exhibition of opium. At all events, a fixed mode of practice should be instituted in every case; and the practitioner ought not to take off from the power of any one course, by mixing it indiscreetly with other methods.

The

The efficacy of oil, largely used, both externally and internally, has been lately asserted in this distemper. Lubricating applications may sometimes quiet the irritation, in the inflamed œsophagus, and are therefore not to be overlooked. Oil will also be more readily swallowed than other liquids.

A thin mixture of vinegar and bran is said to have cured some animals of hydrophobia, in France. If patients can be induced to swallow such a mixture, there can be no objection to it. Perhaps the admixture of something approaching to solidity, like bran, may render deglutition easier. As we have reason to conclude that some degree of inflammation subsists, whenever hydrophobia comes on, it will be proper to use some means of removing it. The application of blisters to the throat may therefore be adviseable; and if the patient could bear the steam of

R 2 warm

warm water, it might be inhaled with advantage, after lubricating the fauces and œsophagus by giving a mouthful of oil. The dreadful resolution of destroying a hydrophobic patient can never be necessary for the safety of the attendants, and is not justifiable upon any principle in the medical superintendants. I believe it is a very false idea, that persons in such unhappy circumstances attempt to injure the bystanders. Timidity, on the contrary, seems the prevailing feature of the disorder. And obedience can at all times be commanded, by the strait-waistcoat even when convulsive motions are apt to come on. I fear it is not unnecessary to add this caution to the rest; for I remember an instance of such a resolution, executed with circumstances of peculiar barbarity, on a poor child, about nine years ago, by the direction of the medical attendants, a few days after the sufferer was seized with hydrophobia.

ORIGIN OF

CONTAGIOUS AND NEW DISEASES.

In popular questions, the topics of discussion frequently arise from particulars of the smallest importance. While innumerable methods are proposed for supporting the poor of this nation, with the least possible expence, it has not been sufficiently explained to the public, that their present situation is extremely dangerous, and often destructive of health and life, to the middle and higher ranks of society. The poor still labour under those hardships which appear to have occasioned the frequency of pestilential diseases,

in earlier states of society. Their habitations are scanty, close, and filthy; the comforts of frequent change and renewal of apparel are unknown to them; their food is often inadequate to their exertions; and this circumstance, joined to the mortifying sense of their condition, produces a continual depression of spirits, out of which they can only be roused by the use of strong liquors. From these causes result consequences so extensively and dreadfully felt, that it will be proper to strengthen my assertion of them, by shewing that I adhere in it to the opinions of the best writers. Most of the ancient writers agreed that new diseases were frequently arising. Barchusen, in his chapter *de Morborum Novitate*, says, "*Plerique veterum inter se conveniebant, pauca intercedere, sed plura morborum genera indies exoriri.*" This is not true of the small-pox and measles only, which
appeared

appeared in the middle age, or the lues, sudor anglicanus, and other diseases well known to be of late date, but the time when hydrophobia and elephantiasis were introduced into Europe is marked by Celsus* and Pliny;† Plutarch agrees with them, in the traditions relating to these diseases.‡ Dio Cassius§ mentions a new disease contracted by the Roman army in Arabia Felix. Another disorder, the lichenæ, or mentagra, which is now lost to us, (if it has not degenerated into the cynanche parotidæa, or MUMPS) was imported from Asia to Rome, and raged among the nobility, according to Pliny.¶ That shocking

* Lib. III. cap. xxv.

† Lib. XXXVI. cap. i.

‡ Symposiac. 8. Quest. 9. Cælius Aurelianus, however, says, that hydrophobia was previously known, but by a different name. Lib. III. cap. xv.

§ Lib. LIII.

¶ Lib. XXVI. cap. i.

disorder, the plica polonica, made its first appearance in the last century. Claudinus asserts this, in his Practice of Physic, and I have seen (I think, in the curious treatise of Joannes Tardinus *de Pilis*) a copy of the application made by the Polish Physicians to the university of Paris, in which they describe the disease as new, highly epidemical, and baffling every effort for its cure.

Glisson assures us, in his treatise on the subject, that the rickets were first known in England, thirty years only before he wrote. Barchusen confirms the opinion of its being a new disease, confined to the western parts of this island. The croup was notoriously a disease unknown to physicians, within these thirty years, and is still confined, in a great measure, to the eastern coast of the kingdom. The leprosy was described, a few years ago, as a very acute
and

and fatal disorder, in one of the provinces of France; the yaws, the sibbens, and other national infectious disorders, afford strong proofs of the variety of animal poisons, and Mr. Hunter, in his excellent book on the Lues, has given good reasons for believing, that new poisons are now produced among the poor of great cities.

The diseases arising from wretchedness, differ in this respect from those of luxury; the first are generally infectious, the latter solitary, but hereditary. This observation would furnish an excellent moral, but as it is needless to suggest it, I pass on to my next point.

All infectious animal poisons, that of the hydrophobia excepted, appear to be formed originally from the human body. This has been the opinion of almost every medical writer, since
the

the publication of Sir John Pringle's book on the diseases of the army. Many separate facts of old date, had pointed out the truth, but, till the distresses of camps and hospitals presented it to that attentive physician, they were neglected and useless, like many valuable passages in the writings of the old physicians.

The facts to which I allude, relate to the first plagues of Athens and Rome. Thucydides and Plutarch ascribe the former to the multitudes of rustics, introduced into the city by Pericles, and crowded together in huts, within the walls. Livy imputed the first plague of Rome, to the number of inhabitants penned up in its narrow limits.

The opinions of physicians have been strangely divided, on the origin of infectious fevers. If, as Sydenham has asserted, the species of epidemics be
infinite,

infinite, such differences might have been expected; but a comparison of accurate descriptions (which are not very common, however, in medical books) does not confirm his opinion; and it is more probable, that all explanations being unsatisfactory, authors equally felt the impossibility of acquiescing in any one,

As an acquaintance with opinions unhappily forms a large share of human knowledge, it is necessary to mention some of the principal theories relating to the rise of PLAGUE and PESTILENTIAL FEVER. I place these together, for I apprehend the plague to be a fever, attended with some unusual symptoms, chiefly produced by its violence. This opinion I have formed principally from Diemerbroek's Cases of Plague,* which have every character of

* Dr. Sydenham has industriously traced a resemblance between the plague and erysipelas, so far was he from considering the former as a peculiar disease.

accuracy,

accuracy, and are recommended by the experience and attention of that author, and by the good sense of his practice. And although the symptoms of eruptions and buboes be distinguished by individual characters in the plague, yet they do not depart, in their general type, very far from the symptoms of malignant fevers; for the latter are very commonly attended by flat eruptions, which physicians term petechiæ, and glandular abscesses are not unfrequent in them; although perhaps such abscesses are more rare at present, than they were two centuries ago.*

Diemerbroek,

*---Plurimi, siquæ non vulgares medici, in eam venerint sententiam, pestilentiam nihil aliud esse, quam febrem summæ putridam, ac putredinis quodam gradu excellentiore solûm ab aliis putridis differentem. Sennert, tom. II. cap. cxxxii.

Hence Dr. Cullen's definition of the plague:

"Typhus, cum summa debilitate."

It

Diemerbroek, Dr. Willis, and some other eminent medical writers of the last century, supposed the plague to be always an infliction from the Deity: others, as Plempius, and some philosophers, of whom it is only necessary to name Lord Verulam, believed it to be caused by demoniacal influence.

Nec poterant quibus id fieret cognoscere causis.

Ergo perfugium sibi habebant omnia divis

Tradere.

LUCRET. lib. V. 1191.

It was a question among the physicians of the last century, whether the plague could exist without a fever. This was owing, evidently, to the rapidity with which the disease destroyed, in some cases. Diemerbroek, in his forty-first history, gives a case of a mild plague, similar to the instances we sometimes see of mild natural small-pox.

We must not suffer ourselves to be deceived by names. λοιμος, Pestis, *μιασμα*, only imply destruction or depravation.

Mr. Holwell, and the other sufferers who escaped from the black hole, in Calcutta, underwent in consequence, a fever which in its crisis resembled the plague.

With

With respect to secondary causes, pestilential fevers were commonly supposed to be produced by a certain state of the atmosphere, which was considered as loaded with the poison. To this supposition Mercurialis properly objected, that if the whole atmosphere were contaminated, no person could escape the disease. Sennertus therefore imagined, that the poison was only dispersed in different parts of the atmosphere. More accurate observations have proved, that the disease is propagated by contagion alone, and this might have been fully learnt from Diemerbroek's facts, though that author held the contrary opinion.

It was allowed, however, (excepting by Sydenham) that the sensible state of the weather had very little connection with the appearance of the plague, as there were examples of its being introduced in all kinds of seasons.

Sydenham

Sydenham owns, that besides the secret constitution of the air, infection is necessary to produce the plague. Some physicians believed, that particular aspects of the planets occasioned the plague. The conjunction of Jupiter and Saturn was reckoned particularly inauspicious: I remember that about eight years ago, a pamphlet was published, foreboding a pestilence, among other calamities, from that event. There were some other idle opinions,* more held by philosophers than by the faculty, such as the production of the disease by ointments; which is admitted by Diemerbroek, with this necessary qualification, that the chief ingredient must be the contagious matter. But the principal secondary

* That of Paracelsus is the most curious and extravagant. He supposed that when a man, thinking of the plague, looked on the moon, he infected that planet; and that the archæus, taking fright at the moon's appearance, became frantic, and thus produced the symptoms of the plague.

cause,

cause, acknowledged by almost all writers, and by some constituted as the essence of the disease, was putridity. The ancients appear to have acknowledged no difference between the putrefaction of the living and the dead body, and this important distinction is too much neglected by modern writers. Living putridity is only marked as *excellentiore gradu*, excepting a writer mentioned by Sennertus, Thomas Minadous, who held, that in the plague there was not proper putridity, but putridity *secundum quid*; and Frederick Hoffman, who has expressly distinguished them, but by a theory of little value: he supposes living putridity to consist in the corruption of the lymph, and dead putridity in the corruption of the blood.

The distinction between them is very obvious in some disease: the last degree of putrefaction, the absolute death

death of the solids, is so far from being the last stage of pestilential disorders, that it is a favourable symptom in typhus when the nails and extremities of the fingers mortify: patients commonly recover with this appearance, which is the NECROSIS of Sauvages. And I have been informed, by a very respectable friend, who now occupies the anatomical chair in one of the universities of a neighbouring kingdom,* that while he assisted in the late Dr. Hunter's dissecting room, he observed that bodies marked with petechiæ, therefore probably dead of malignant fevers, did not putrefy so soon as those which were entirely free from petechial appearances. I shall have occasion to observe afterwards, that the poisons produced by these two different kinds of putridity are communicated, generally, in different

* Since this essay was written, the public has lost the gentleman alluded to, Mr. Hamilton of Glasgow.

S

ways,

ways, and give rise to very different symptoms.

It is a general opinion, that pestilential disorders are occasioned by the effluvia of dead bodies, but there is reason to question the truth of this. When plague has appeared, in the neighbourhood of places where many bodies had remained unburied, after general engagements; other causes can be pointed out, as more likely to have produced it. But many instances can be produced, in which thousands of dead bodies have been left to putrefy on the field of battle, without causing pestilential distempers. This was not unnoticed by the attentive Diemerbroek. “*Cadavera, sive hominum,*” “says he, “*sive aliorum animalium*” “*putrescentia pestem non generare, docent multæ magnæ strages, in quibus*” “*talis cadaverum inhumatorum putrefactio nullas pestes induxit.* Anno

“ 1642

“ 1642 in agro Juliacensi, maxima
 “ strages facta est, et ad minimum
 “ 8000 militum, occisa fuerunt, præter
 “ majorem adhuc famulorum, rustico-
 “ rum, aurigarum, puerorum & mu-
 “ lierum numerum, atque equorum
 “ copiam innumerabilem; corpora in-
 “ humata sub diu computruerunt, nulla
 “ tamen pestis insecuta est. Hic in
 “ Germania, durantibus his nostri ævi
 “ crudelissimis bellis, etiam plurimæ
 “ maximæ strages factæ sunt, post mul-
 “ tas tamen illarum nulla peste sub-
 “ sequente” (p. 31.). These facts are
 strengthened by a well known circum-
 stance, that in no case could the origin
 of a putrid fever be ever traced to the
 effluvia of dead bodies in a dissecting
 room. Nor have fevers been observed
 to originate, or to rage more severely
 in houses surrounding church-yards, in
 the middle of large towns, though the
 stench of the putrid bodies, over-heaped
 in such receptacles, is often insufferably
 S 2 offensive.

offensive. It is true, that the putrefaction of dead bodies generates a poison, which is highly noxious when received into the living body, by a wound, or any raw surface, but this poison does not seem to infect, like that of fevers, by exhalation, and its first effect (unlike the other) is to occasion the death of the part where it is admitted.

It must not be concealed, that noxious effluvia frequently arise from putrefying bodies, in a certain state.* Dr. Monro mentions a remarkable instance of this, in his Treatise on the Dropsy, and some later examples are recorded by Mr. St. John. But it does not appear, that in the cases he mentions,

* It appears, from some late observations, made on altering the vaults of a church, in France, that the *confined effluvia* of putrid bodies produce fever, when brought into action. Perhaps this is the solution of the question.

the noxious effluvia produced any symptoms resembling those of pestilential fever; on the contrary, they acted by direct stimulus, occasioning inflammatory complaints, from which we may conclude, that they are essentially different from febrile contagion.

Diemerbroek inclines to think that the plague may be produced by putrid food, but the instances he produces are chiefly those of long sieges, where other causes concur in occasioning fevers; and his principal example, the plague of Marseilles, during its siege by Trebonius, fails him; for Cæsar does not say that the Massilians used putrid food, but stale and spoilt corn, which only afforded imperfect nourishment:
 “Gravi etiam pestilentia conflictati,
 “ex diutina conclusione, & mutatione
 “victus (panico enim vetere, atque
 “hordeo corrupto omnes alebantur;
 “quod ad hujusmodi casus antiquitas
 S 3 “paratum

“paratum in publicum contulerant.)”
Bell. Civil. lib. II. cap. xxii. 1.

It is now generally allowed, that the effluvia of living persons, confined in close situations, produces the poison of fever. This has been too fatally proved by the mortality in jails and hospitals. Want of cleanliness certainly produces the same effects; for I have known a pestilential fever produced in a new-raised regiment, in quarters where regular troops are always very healthy, and where there is a constant ventilation of the briskest kind.

It is peculiar to the animal poisons, that they not only give rise to a disease similar to their original, but that, however small the quantity applied, they convert a large portion of the fluids to their own nature. Several questions arise on this subject.

1. Does

1. Does contagion operate immediately on the nervous or circulating systems? From the suddenness of the attack, in many cases, after exposure, it is commonly, and I believe justly, supposed to act immediately on the nervous system.

2. Does it operate by contact only, or *ad distans*? This question once divided the medical schools; but from a variety of facts, and particularly from those of Diemerbroek, I think it tolerably evident, that the contagion of fever may be propagated by an impression on the olfactory nerves. It is usual for persons to complain of an intolerable smell about the sick, when they receive infection. This mode of infection, indeed, is resolvable into contact.

3. Does contagion produce both putridity and contagious matter? This question was never considered. by those

who made the essence of pestilential fevers consist in putridity. At present, we know that a patient, labouring under a simple nervous fever, without any symptoms of putridity who communicates the disease to two different persons, may give to one a disease exactly like his own, and to the other a putrid fever. And the putrid symptoms commonly appear so late, that they may be properly referred to the constitution, and reckoned accessory symptoms.

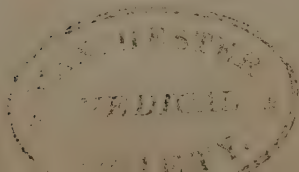
4. Does contagion assimilate all the fluids to its own nature? I think there are strong objections to the affirmative of this question.

a Because many phenomena, in the symptoms and cure of fevers, point out a spasmodic affection, or diseased action of the extreme blood vessels, as the real cause of fever. Ample proof of this may be found in the books of Piens, Hoffman,

Hoffman, and Dr. Cullen. This affection is supported by the action of the contagion, and perhaps is strengthened as more contagion is produced. If all the fluids, then, were converted into a contagious mass, no patient could recover from a fever of a fortnight's continuance.

b Neither would a patient, after recovering from a nervous fever, cease to infect others, till the whole mass of his fluids were changed.

c Nor would pestilential diseases be so speedily cured, as we often see them, by throwing in a small quantity of bark and wine, which can only be supposed to act, by checking the morbid state of the moving fibres. Another question, connected with this, and illustrative of it, is, whether the dead body of a person destroyed by a plague or fever, be capable of communicating



nicating infection. On this subject, facts are wanting. Rondeletius (as quoted by Sennertus) asserted that he had dissected bodies dead of the plague, in presence of many of his pupils, with perfect safety. Diemerbroek is of opinion that the dead body may infect, while it continues warm. If it be true, that only a part of the animal fluids is rendered contagious, when the patient dies, the exhalation of poison must be stopped by the extinction of the disease. Many physicians of the last century, and Diemerbroek among the rest, however, believed that the putrid dead body was more infectious than the living patient.*

5. It is an important question, whether the contagious matter can be

* Forestus thought the dead body less infectious. Hoffman. de venen. Corp. Human. tom. I. p. 203. See Garmann De Cadaverum Contagio, on this subject, from p. 363 to 371.

destroyed,

destroyed, as it issues from the body. If, as Mr. St. John imagines, the poison of fevers is a peculiar *gas* exhaled from the surface, some fortunate discovery may possibly furnish us with the method of neutralizing it, so as to prevent it from infecting the patient's assistants; but experiments are, perhaps, both too hazardous and too difficult, in this case.

The sources of pestilential disorders, then, of dysenteries, and some of the worst cutaneous disorders, have been sieges, camps, jails, and hospitals. The plague itself appears to originate with the crowded inhabitants of the miserable villages in the east.

It is a fact equally alarming and true, that many persons in indigent circumstances, are exposed, in our great towns, to such evils as I have shewn to be productive of febrile contagion, and probably

probably of new diseases. The degree of misery, existing even in manufacturing towns, is only to be credited by those who have witnessed it. The poor are indeed the first sufferers, but the mischief does not always rest with them. By secret avenues it reaches the most opulent, and severely revenges their neglect, or insensibility to the wretchedness surrounding them.

In all unhealthy seasons, and times of public distress, the poorer members of the community are most deeply injured, and most easily affected by the causes of disease; all the methods of guarding against infection, or of destroying it where it has once entered, are to a certain degree expensive, and require, besides, an activity not to be expected from the sullen indolence of the poor. Their want of knowledge, and want of foresight also incapacitate them from any effectual struggles against epidemics.

In

In all these situations, the circumstances which seem, from our inquiry, to produce animal poisons, are, as I have already said, those to which the poor are still exposed.

These circumstances are,

I. Want of fresh air.

II. A deficient or improper diet.

III. Want of cleanliness; and chiefly want of a proper renewal and change of clothes.

IV. Anxiety and depression of spirits.

I have placed the last among the efficient causes, because it is not proved that the mere confinement of the effluvia of clean and healthy persons, free from mental uneasiness, can become poisonous; otherwise the close rooms
of

of an elegant house might produce fevers, as well as garrets and cellars;* besides, it will be readily admitted as an efficient cause, by those who have observed the changes in sores, or stumps, occasioned by passions of the mind. Dr. Hoffman gives an instance, from his own knowledge, of death produced by the bite of a man highly enraged, in consequence of the poisonous nature of the saliva. That the poor perpetuate animal poisons, cannot be doubted. When a fever either

* Upon this passage, a writer in the *Critical Review* for December 1792, made the following remark; the candour, honesty, and propriety of which, I leave to the censure of the reader,

“ Among the remoter causes of fevers, Dr. Ferriar does not advert to one distinction: it is not the confinement of clean healthy persons that occasions fevers, but the crowded small apartments of dirty ones, though depression of spirits undoubtedly contributes to its power.”

In return for several obligations of this kind, which I have received from the writers in this journal, so eminent for its scurrility, I shall only say, in the words of Parson Adams; “ Whoever they are, may God forgive them, and bestow on them a little more sense, as well as humanity.”

arises,

arises, or is introduced into the house of a poor person, every circumstance favouring its progress, it generally attacks the family in succession: their clothes, and the woollen and cotton parts of their furniture become infected, retain the infection tenaciously, and are capable of communicating the disease for a long time. These they can neither afford to purify or destroy. Thus their dwellings and persons continually breathe contagion; and where this is the situation, not of one family only, but of a very great number, it is hardly possible to prevent the communication of the disease to the families of the rich, among whom it would never have been produced.

We are told by Diemerbroek, that it was a common practice in Italy and France, when the plague appeared in any large town, to drive out the poor immediately;

immediately;* so fully were the magistrates convinced that the disease was preserved and propagated by them. It is well known that a nervous fever of the worst kind is rendered endemical in Edinburgh, by the practice of mewing up families in small subterraneous dwellings, where the contagion is constantly reproduced. The cellars so frequently inhabited, in this place, are better ventilated than those of Edinburgh, but may become pernicious also, when age shall have rendered them equally dirty. I have known a nervous fever, which was putrid also in many cases, preserved in a small town, for almost two years, among the poor alone. The manner of building practised there was evidently the cause. The principal streets are wide, and laid down at right

* At the commencement of the plague of Marseilles, all beggars were ordered to quit the town. Account of the Plague of Marseilles, 1721.

angles;

angles; but the poor are pent up in small houses, huddled together in narrow alleys, which are commonly shut up at one end. But one of the most satisfactory instances of this sort, was observed by Dr. Heysham, at Carlisle, in 1778 or 1779. A fever of the nervous kind raged in that city, which did not seem to have been introduced from any neighbouring place. Dr. Heysham, with great industry, traced its origin to a house near one of the gates, which was tenanted by five or six very poor families; these unhappy creatures had blocked up every avenue of light (as Dr. Heysham expresses it) with which even wretchedness could dispense, to lessen the burden of the window-tax, and thus contaminated the air of their cells, to such a degree, as to produce the poison of fever among them.

Thus it appears, that the safety of the rich is intimately connected with
 T the

the welfare of the poor, and that a minute and constant attention to their wants, is not less an act of self-preservation than of virtue. For we are not only exposed now, to the ravages of disorders, the poisons of which are perpetuated in the abodes of misery, but we are threatened with the rise of new contagions, the danger of which cannot be foretold, nor perhaps the remedies easily ascertained. In this the true danger of luxury consists, which I think authors have too much overlooked: the excesses of an individual, in their direct consequences, affect only himself and his family: but when voluptuous habits induce him to withhold his real superfluities from the indigent, he contributes to the diseases and destruction of thousands.

Accident and misfortune have too often done those services to mankind, which

which wisdom would not have been permitted to render. The fire of London extirpated the plague in this country, and even the blow of an assassin once proved a salutary remedy.* Perhaps some such extraordinary circumstances must do for us, what it is in our power to do for ourselves, in disarming the virulence of animal poisons, by increasing the happiness of our fellow-creatures. To imagine, that by any human prudence, all misery (even from indigence) can be relieved, or all contagion destroyed, would be ridiculous; but as events, unexpected, or certainly not promoted with this view, have abated the frequency and violence of some epidemics, I see no reason to doubt, that prudence, by imitating such operations, may still farther lessen the evils of disease. In any event, a closer attention to the comfort of the poor,

* Schenk, *Observat.* Lib. 5.

than

than is commonly practised, is a desirable object of attainment; and it may excite the benevolence of some men, if they can be convinced, that acts of charity will not only serve them in another life, but promise them a longer enjoyment of the present.



END OF THE FIRST VOLUME.

MEDICAL HISTORIES

AND

REFLECTIONS.



MEDICAL HISTORIES

AND

REFLECTIONS

VOLUME II.



BY

JOHN FERRIAR, M. D.

PHYSICIAN TO THE MANCHESTER INFIRMARY,
AND LUNATIC HOSPITAL.

ΜΙΚΡΑ ΤΕ ΜΕΓΑΛΩΝ, ΚΑΙ ΟΛΙΓΑ ΠΟΛΛΩΝ.

DIONYS. HALICARNASS.

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PREFACE.

AT this time, when the attention of the medical world is supposed to be again fixed on system and hypothesis, some apology may seem necessary for the publication of a work, conducted on the strict principles of inductive philosophy. The favourable manner in which the former volume of these Essays was received, em-

boldens me to lay before the public the fruits of two years' additional labour: and I am encouraged by considering, that the most splendid theories must be ultimately judged by careful, and repeated observation.

I confess myself to be among the number of those who think, that after all the improvements in medicine, to which the present century has given rise, the science is not ripe for a final arrangement. Physicians have not pursued the instructions of BACON, for a period of time sufficient to have fulfilled his intentions; and I cannot perceive, that any of our most daring, or curious enquirers, have deviated,
with

with advantage, from the prospects of that great mind. We may even obtain, from his own words, a just representation of the present state of medical philosophy, if allowance be made for the quaintness of his mythological allusions. “To say the truth, “I am of this opinion, that those two “faculties, *dogmatical* and *empirical*, “are not as yet well joined and coupled together, but as new gifts of “the gods, imposed either upon philosophical abstractions, as upon a “flying bird, or upon slow and dull “experience, as upon an ass. And “yet methinks, I would not entertain “an ill conceit of this ass, if it meet “not with the accidents of travel and
“thirst.

“thirst. For I am persuaded, that
“whoso constantly goes on, by the
“conduct of experience as by a cer-
“tain rule and method, and not
“covets to meet with such experi-
“ments by the way, as conduce
“either to gain or ostentation, may
“prove no unfit porter, to bear his
“new addition of divine munifi-
“cence.”*

In the mean time we have to
complain, that with every attempt
towards the formation of a system,
new applications of words are intro-
duced, which, though desirable in

* Bacon's *Wisdom of the Ancients*, sub titul.
Prometheus.

the art of poetry, are very inconvenient in pathological books, especially when this is done to give an air of novelty to old theories and observations. For between the ancient language, which practitioners cannot entirely reject, and the new dialect, which they cannot wholly adopt, the style of medical books is reduced to a kind of jargon, that the author himself may possibly understand, but which his readers find it very difficult to unriddle. Hence results a neglect of medical literature, and hence the pernicious habit of regarding as new, whatever has not appeared in the publications of the last half-century.

To

To those who indulge a hope that a new æra is opening in medicine, that the springs of living Nature are discovered, and that their direction will henceforth be placed in the hands of the chemical physician, these remarks may appear obsolete and discouraging. But from my experience of the effects of pneumatic medicine, I am inclined to believe, that its real importance will not be quickly ascertained. It may form a valuable addition to the *Materia Medica*, but I do not expect from it a renovation of the science of medicine itself.

Whatever may be the opinion formed of my conclusions, I hope
the

the following collection will be found accurate in point of facts. In the practice of medicine, as in all other occurrences, we derive instruction, not less from disappointment than from success. It is, indeed, painful to hear of plans disconcerted, and opinions contradicted by experience, and to toil through a course of observations, divested of brilliant events, and magnificent expectations. But I have endeavoured to convey, faithfully, the impression which I have received from a great number of cases. Whether the result be consonant to some prevailing notions, I shall not decide: it is enough for me that I know it to be true. *Non enim*

me

*me cuiquam mancipavi, nullius nomen
fero : multum magnorum virorum iudicio
credo, aliquid et meo vindico. Senec.
Epist. 45.*

CONVERSION

OF

DISEASES.



MEDICAL HISTORIES

AND

REFLECTIONS.

OF THE CONVERSION OF DISEASES.

1. **A** disease is said to be converted, when new symptoms arise in its progress, which require a different designation, and which either put a period to the original disorder, or combining with it, alter the physician's views respecting the prognostics, or the method of cure. Many instances of this kind are familiar, as the conversion of intermittents into continued fevers, or obstructions of the viscera; of hæmoptœ into phthisis, of jaundice into dropsy, and the like. Others are more unusual, and unexpected, and deserve to be noticed, because

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they occasion much perplexity when they occur in practice, especially as this subject has been almost totally overlooked by medical writers.

2. We owe the first observations on the subject of Conversion, to HIPPOCRATES, and his annotators. HOFFMAN has scarcely touched on it, in his short dissertation, *de Morborum transmutatione*. BAGLIVI, though very desirous that it should be treated at length, and though liberal in promises of assistance, confines his recital of facts in a great measure to those of HIPPOCRATES. The only express treatise that I know on this subject, is the QUÆ EX QUIBUS of RODERICUS A CASTRO; a quaint title, which the author took from one of the aphorisms, and which, he says, ought to have been, *Quæ ex Quibus, in quos*. This is a book better conceived than executed; for to the usual error of that time, the making unprofitable commentaries on the *Prorrhetica*, this author has added that of considering many common symptoms of diseases as cases

of

of conversion. It is not destitute, however, of useful observations, and we can only wish, that of these the author had been somewhat more liberal.

3. This subject was formerly arranged under two divisions; when the original disease subsisted after the accession of the second, it was termed a case of *Epigenesis*, or *propagation*; when the second disease put a period to the first, it was called an instance of *Metaptosis*, *Metastasis*, or *translation*. With so loose a distinction, which excludes many cases of conversion, it cannot be wondered, that neither DURET, in his notes on the aphorisms, nor Dr. DE CASTRO, acquired an accurate knowledge of this matter. For the chief difference between the *Metaptosis* and *Epigenesis* is, that the relation of the successive morbid appearances, and their dependance upon each other, cannot be so clearly perceived, in one case as in the other. It would have been more useful, to have distinguished conversions by their influence on the event of the disease, as

some are dangerous, and generally fatal; others, while they terminate the original disorder, conduce to a more speedy restoration of health. Thus, when a continued fever supervenes to pneumonic inflammation, the patient is in great danger: it is *gravi malo grave malum accedere*; when a diarrhæa supervenes to continued fever, in certain stages, it terminates the fever earlier than the regular course of the disease would have done.

All cases of conversion may, perhaps, be conveniently referred to the following heads. I. The supervening disease may be produced by the remote causes of the original disorder; in this case, the action of those causes, after producing its first effect, is prolonged so as to excite a new train of symptoms. II. The supervening disease may arise from the excess, or combination of the symptoms of the original complaint. III. The state of the habit, produced by the first disease, may give rise to a new disorder. IV. Conversions may happen, from the imprudent suppression

of

of habitual diseases. Anomalous cases may occur from the coincidence of independent diseases, or from the mixture of two or more of these sources of conversion.

I. The application of certain remote causes may be sufficiently powerful, to produce a fresh disease, after the first has been brought on by their action. It is common to find pneumonic inflammation supervene to typhus, by a continuance of the application of cold or dampness, which operated as a remote cause of the fever. On the contrary, from the tendency of the system to inflammation, or from the manner in which cold has been applied, the pneumonic symptoms precede the fever in some cases, and even run their course, before the fever assumes a regular form. I have seen a case of peripneumonia notha end in typhus, and the typhus in mania. In a fatal case of the conversion of pleurisy into typhus, the left lobe of the lungs was destroyed by suppuration.*

* Llesqtaud, Hist. Anat. Med. t. 1, p. 533, ob. 378.

In a peripneumony, symptoms of phrenitis supervened on the fifth day, and the patient died on the seventh. The left lobe of the lungs was found suppurated; the vessels of the brain were distended with blood, and the turns of the brain were filled with a bloody, serous effusion.* I have seen a general rheumatic affection, accompanied with swellings and inflammation in the larger joints, converted into a typhus in the first week; and on the contrary, I have more than once found a lingering typhus terminate in rheumatism, but this last case does not come under the present division.

I believe the conversion of the mild synochus, or typhus, to inflammation of the peritoneum, or villous coat of the intestines, may be referred in many cases to the action of the remote causes of fever. This conversion certainly terminates the original fever; and the diarrhæa, which is often a principal symptom of the inflammation, sometimes

* Lieutaud, *Hist. Anat. Med.* t. 1. p. 472; *obs.* 137.

accedes immediately after the feverish attack.* I have seen this conversion take place, and the inflammatory symptoms have run very high, when the patient was covered with petechiæ.

When the villous coat of the intestines is inflamed, obstinate vomiting is commonly a symptom, besides the distension and pain of the abdomen.†

The presence of irritating matters in the alimentary canal sometimes produces singular conversions, in the beginning of fevers. A patient, at the first attack of a rheumatic fever, was affected with epileptic fits, to which he had never been formerly subject. Suspecting that they were occasioned by the stimulus of accumulated bile, I ordered a vomit, which brought off a large quantity of green bile, and relieved him entirely from the convulsions. In the course of the fever,

* Lieutaud. lib. 1. obs. 336.

† Ib. lib. 1. obs. 334, 338.

the convulsions returned slightly, and were again removed by some doses of calomel, which always produced green stools. This kind of conversion is noticed, in Lommius's *Observationes Medicinales*.

I have seen cholera converted to typhus, and as might be expected, a long and dangerous fever produced. There was an uncommon appearance of stupor, at the first attack of cholera, which continued, and increased after the symptoms of that disease were abated, but the brown list on the tongue did not appear till several days afterwards. Dysentery and diarrhæa are often converted to continued fever; but diarrhæa may be considered almost as a symptom of the feverish disposition, and as the forerunner of typhus.*

* I have met with the following curious remark, in Dr. Desgenettes' account of the diseases of the French army in Egypt. I do not recollect any similar occurrence in this country.

L' Ophthalmie apportoit toujours un soulagement marqué, lorsqu' elles survenaient dans les dysenteries de long cours: les douleurs des yeux, et celles du bas ventre, se remplaçoient mutuellement:—Dr. Bruant.

Histoire médicale de l' armée d' Orient, par Desgenettes'.

Partie 2, p. 25.

Hysteria

Hysteria is not unfrequently converted into epilepsy and insanity, by the continued action of its remote causes. I have seen the discriminating symptoms of both diseases so much intermixed in the paroxysms, that it was impossible to determine which of them predominated. In one case of this sort, a conversion into mania took place, but the change was perhaps decided by the violence of the passions; in another instance, after a long struggle, hysteria prevailed. When somnambulism has attended the first appearance of such mixed diseases, I have known symptoms of oppression of the brain come on, and the patients have died lethargic.

When epilepsy has supervened to anasarca, and proved fatal, water, as might be expected, has been found on the surface, and in the lateral ventricles of the brain; the *plexus choroides* was likewise full of hydatids.*

* Lieutaud. Hist. Anat. Med. t. 2. p. 135. obs. 167.

In a child, two years of age, I have seen a paralysis of the right side converted to hydrocephalus; the sutures of the cranium separated.* Here, as in some other instances, the original disease was constituted, by the appearance of symptoms unusual in the first stages of hydrocephalus, although there was a perfect unity of cause. Probably, the paralytic form resulted from the superior degree of compression, which the brain must have suffered before the opening of the sutures.

† “I have at this time, July 12th, 1796, under my observation a curious instance of the convertibility of diseases. A lady, (Ætat. 26.) about a year and a half ago, was far gone in a *pulmonary consumption*; having an almost incessant cough, much pain in the left side, a quick pulse, hectic heats, and colliquative sweats. Dr. Eason first attended her, and I was afterwards called into consultation with him. In five

* Med. Hist. and Reflections, p. 102.

† A case communicated by Dr. Percival.

or six weeks from this period, an *ascites* manifested itself gradually, and with it we remarked a progressive abatement of the symptoms of phthisis. She was tapped; a considerable quantity of water was discharged; and by the use of tonics and diuretics the dropsy was completely cured. The pulmonary affections remained dormant many months: but the *cough* then returned with its former alarming concomitants. A *stupor* and almost constant *drowsiness* now took place, and at the same time a proportionate alleviation of the cough. On the 29th of June, 1796, I was called to her assistance, and found her in a state of *lethargy*. From this she was roused in a few hours by sinapisms, volatiles, and other appropriate means of relief. When she was capable of noticing objects around her, and of answering questions, I discovered that the right eye was become paralytic, that it was nearly insensible to the light, and that she had little or no power of motion in the eye-lid. The drowsiness still continues, (July 12th.) but in a much less degree.

The

The pupil of the right eye is unnaturally dilated, and the organ appears to be incapable of vision. Over the action of the eye-lid she has rather more power; but it always drops down without a strong effort of volition. To-day for the first time she complains of pain in the head. The pulse beats about ninety strokes in a minute. Her appetite is inordinately craving; a circumstance, which, in the present instance, there is no reason to ascribe to worms, and which I have sometimes observed to be attendant on cases suspected to be slightly *hydrocephalus*."

I remember a case, in which the progress of paralysis in one arm and one leg, was evidently connected with the increase of scrophulous swellings on the upper part of each of those limbs. Eight months after the appearance of the paralytic symptoms, the patient complained of severe head-ach, vision became indistinct, and at length was entirely lost. Epileptic fits then came on, and he died comatose. When the head was opened,
the

the ventricles of the brain were found full of water, and several tumours, which, in the prevailing medical language, might be called scrophulous, were observed in different parts of the brain. In this instance the conversion from a slight scrophulous affection to palsy, epilepsy, and coma, was in reality the regular progress of the disease, uniform in its cause, but too obscurely indicated to be originally considered as one affection, diversified in its symptoms. It is not impossible, that scrophulous ophthalmia may be sometimes supported by similar, but less important læsions of the brain.

Cases of hysterical conversions, which belong to this head, are very common sources of error to young practitioners, and sometimes deceive even the most experienced. Whoever would present us with a good book on the *fallacy of symptoms*, which is greatly wanted, must be completely master of this unaccountable disease.

We are ignorant by what laws the body possesses a power of representing the most
hazardous

hazardous disorders, without incurring danger; of counterfeiting the greatest derangement in the circulating system, without materially altering its movements; of producing madness, conscious of its extravagancies, and of increasing the acuteness of sensation, by oppressing the common sensorium. In hysterical affections, all these appearances are excited, which are incompatible with the reasonings of every system-maker, who has yet endeavoured to explain the inexplicable. Nature, as if in ridicule of the attempts to unmask her, has in this class of diseases, reconciled contradictions, and realized improbabilities, with a mysterious versatility, which inspires the true philosopher with diffidence, and reduces the systematic to despair.

I have met with several cases of hysterical hæmoptœ, in which the quantity of blood evacuated was very considerable; six or eight ounces were sometimes spit up daily, for a fortnight or three weeks successively. Most of the usual symptoms attended, which
denote

denote danger in this complaint, when it arises from other causes, but the equal, moderate state of the pulse, and the appearance of some degree of the globus hystericus, seemed to determine the nature of the complaint; a conversion, accordingly, soon took place to the ordinary hysteric paroxysm, and no bad consequence followed the hæmorrhage from the lungs.

When the hysteric disposition is set in motion, it is not uncommon to find many of the different viscera attacked by it in turns, and the diseases peculiar to each counterfeited with much exactness. I have seen symptoms of paralysis, jaundice, palpitation, and nephritis, succeed each other rapidly in the same patient, while some of the characteristic marks of hysteria have been discernible, and where the unity of the disease was proved, by the disappearance of all menacing affections, on the approach of regular fits. In one case, the bowels were attacked, and the symptoms of enteritis were so precisely imitated, as to give much alarm for the patient's safety.

safety. I suspected the real nature of the disease, from observing that the pulse was soft and full, that the evacuations were natural, and that her spirits were agitated, even to involuntary emotions, by slight causes. This case terminated successfully, on the accession of clear hysteric symptoms.

In all similar instances, the supervening hysterical paroxysm puts a favourable termination to the irregular appearances.

Several years ago, I attended an elderly lady, for a complaint which seemed to vibrate between apoplexy and palsy; after lying for several weeks in a state which afforded little hope of amendment, she was affected with involuntary sobbing and weeping; the complaints in her head and limbs were converted into hysterical convulsions, and she recovered completely.

It is very common to meet with syncopé, or palpitations of the heart and great vessels, accompanied with a soporific depression, or
extreme

extreme dejection of strength and spirits, and converted, after deep sighing or discharge of tears, into the hysterical paroxysm. In these cases, the pulse is sometimes full and regular, during the most alarming appearance of sinking; and sometimes variable to such a degree, as to exclude all conjecture, excepting that of an hysteric origin.

To this head also belong the facts of vicarious hæmorrhage: these have been so well explained by different authors, that I shall only mention one or two remarkable occurrences of this kind, which I have met with. A shoemaker, about forty years of age, was suddenly seized with a continued bleeding from the urethra, without effort, or any desire to pass urine. When I saw him, an hour or two after the seizure, the blood flowed slowly, but without intermission. Upon pressing the lips of the urethra together for a few minutes, he became uneasy, and when the blood was suffered to pass again, a small coagulum came off. He said, that clots of blood were discharged some-

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times, even when he had not attempted to restrain the hæmorrhage. The only cause to which this singular phænomenon could be referred, was that he had been accustomed, during several years, to be let blood once in six months, and that he had omitted this evacuation, for three years preceding the hæmorrhage I have described. After continuing upwards of twelve hours, during which the blood soaked through the bed-clothes, and overspread great part of the floor, the hæmorrhage ceased, and the patient recovered.

A young girl, subject to amenorrhæa, was affected, during the absence of the periodical discharge, with ulceration of the navel.

I have known rheumatic pains and leucophlegmatic swellings produced at the same time, by the application of cold; and in some cases of general dropsy, succeeding exposure to cold, there has been much pain and stiffness of the limbs, at the commencement of the disease. I have even seen
anasarca

anasarca and typhus produced by the same degree of cold, at the same time.

Conversions of the different genera of fever into each other are so common, and so well described by practical writers, that I shall content myself with indicating, that in many cases they belong to this head. Conversions of intermittent to continued fevers, and of synochus to typhus, are those which may be properly comprehended here.

II. The symptoms of an idiopathic disease may, by their violence, assume the appearance, and require the attention due to a new complaint; or affections of particular viscera, which, in their incipient state, are only regarded as symptoms of general indisposition, may, as they gain ground, extinguish the original disease, or be protracted beyond it.

This head comprehends such a variety of cases, that to treat it fully, would be to give the history of all symptomatic diseases. I

shall therefore confine myself, to cases which have come more immediately under my own observation.

I have known the catarrhal affection, which so often accompanies synochus, converted to a harrassing cough, of the most alarming nature; attended with a very great expectoration. When symptoms of pneumonic inflammation supervene to typhus, there is always great reason to apprehend a consumption. In many instances of the phthisis mucosa, which I have seen succeed to typhus, the lungs seemed to have acquired the habit of secreting an unusual quantity of mucus, from encreased irritability; for I have found, that by removing the patients to a drier situation, and purer air, the quantity expectorated has been quickly reduced, from a quart or more, to a few ounces in the day.*

Dr.

* I have also found *digitalis* serviceable, in similar circumstances, whether by diminishing general irritability, or by lessening the determination to the lungs, in consequence of its diuretic power, I cannot decide. But I have repeatedly stopped the progress of incipient consumptions, by administering

Dr. Percival informs me, that he has seen an effusion into the cavities of the brain, produced by the violent succussions of coughing, in a confirmed pulmonary consumption, which effusion terminated fatally, with a previous suppression, more than a week before death, of all the pulmonic symptoms.

I have seen the hæmorrhagic effort, which is not an unfrequent symptom of typhus, when directed to the bowels, extinguish the fever, and become an alarming disease, by its duration, and by the quantity of pure blood passed with every stool.

The dyspnœa which is so often converted into general dropsy, frequently puts on

administering this remedy, when the patient was too much weakened by preceding disease, to bear the usual methods of lessening the impetus of the circulating system. The florid consumption seldom appears among the natives of Manchester.

When this note was written, I had not formed a decisive opinion respecting the sedative power of digitalis, in phthisical cases. Much subsequent experience has enabled me to speak with confidence on this subject, as the reader will find, in the Essay on Digitalis, as now republished.

every appearance of asthma, before the swellings commence. In one case of this kind, the difficulty of breathing, and pain in the breast were so urgent, that I found repeated bleeding necessary to relieve the patient.* In this case, respiration was stridulous, and the voice was scarcely articulate before bleeding.

In some cases of this nature, where the complaints in the chest were evidently occasioned by serous effusion into the cellular membrane, and pericardium, I have afforded patients great relief, by a combination of diuretics and purgatives, with mucilage of gum arabic. It may be proper to mention here, that during the prevalence of the last severe influenza, in 1803, where the muscular pains and dyspnœa were the most distressing symptoms, I found nothing relieve the patients so speedily as a mucilaginous mixture, with a sufficient quantity of syrup of buckthorn, and the addition of a farrago of liquid diuretics.

* See Hist. 49, of the Remedies of Dropsy.

The dyspnœa and dry cough, on the contrary, which are converted into hydrothorax, are commonly accompanied with much extenuation and general debility, and are chiefly to be traced to their real cause, by the torpor of the left arm, or by shooting pains, extending to the fingers of either, or both arms.

It may not be irregular to mention in this place, that the pain in the lower part of the abdomen, with which I have generally seen dilatations of the heart accompanied, is sometimes so urgent, that the patient hardly makes any other complaint at the commencement of the disease. Lieutaud has mentioned severe pain in the region of the stomach, as a symptom, in two cases of dropsy of the pericardium, with dilated heart. In one, at present under my care, the pain was originally in the hypogastric region, but has now fixed in the region of the stomach.

In a case of acute rheumatism, I have seen the swellings of the fore arm suppurate

in different places, so as to produce a succession of abscesses, which were all opened with the knife, and healed readily. In opening one abscess, the nerves, supplying two fingers, were divided; the fingers were paralytic for some weeks after the incision was healed, but their sensation and motion were gradually restored, and the patient entirely recovered the use of them.

It is one of the most perplexing occurrences in medicine, when the supervening disease is produced by a symptom of some latent complaint; when, for example, phthisical symptoms arise in a scrophulous or gouty patient, who exhibits, at first, no other appearance of those two diseases. I remember an instance, in which all the characters of confirmed phthisis pulmonalis were present, that terminated in recovery, upon the patient's coughing up some solid particles, resembling chalk-stones. Two other instances of this complaint have occurred to me last year. The mass spit up, as described to me, was of a considerable size. I procured
a small

a small specimen of the expectorated substance, in one case, which was analysed by my friend Dr. W. Henry, and found to be exactly similar to the substance of the bones. This analysis sets aside the opinion formerly entertained, that this event was produced by an arthritic disposition, and shews that this uncommon disease arises from a misplaced deposition of osseous matter.

Several years ago, I met with an uncommon appearance in opening a patient, who died from the severity of dyspnœa. The lungs were in a general state of ossification, and when cut into, crackled like strong parchment.

This curious fact proves that the branches of the bronchia may take on a disposition to ossify, like the arteries. Lieutaud has collected several cases of calculi, and partial ossification in the lungs. (Hist. Anat. Med.)

Some other cases, exactly similar, have been mentioned to me in conversation, by
different

different practitioners. Several instances, which are commonly named misplaced gout, are in reality conversions, and of a kind very apt to mislead the judgment. For the following very remarkable case, I am indebted to Dr. Percival.

“A gentleman of rank in this county, was
“supposed to be in an advanced state, of what
“is called a galloping consumption, having
“an incessant cough, an expectoration ap-
“parently purulent, continued heats, and
“night sweats. Yet his cure was accom-
“plished by giving wine-whey copiously,
“and by administering doses of hartshorn
“and spermaceti. A gentle fit of the gout
“was produced, by this cordial regimen.
“The fever, cough, and spitting, progres-
“sively abated, and the health of the patient
“was soon perfectly re-established.”

I have seen an effort of this kind spontaneously made, at the close of a phthisical complaint, in a very exhausted habit; but though one great toe inflamed considerably,
the

the patient was too completely reduced to derive much benefit from it.

There is a strong resemblance between hysteria and gout, in the power of counterfeiting different diseases, but with this material distinction, that the hysterical representations are commonly void of danger, while those produced by gout are often more dangerous, than the simple disorders which they imitate. The hysterical hæmoptœe, for example, is seldom productive of bad consequences, but the arthritic apoplexy, pneumonia, and cardialgia, are much more alarming, and run their course quicker, than similar complaints originating from other causes. But these diseases agree in this respect, that the accession of the regular paroxysm puts a favourable period, to the irregular symptoms of each.

I met with a singular case of conversion, in the course of the last autumn. A married man complained of cough, dyspnœa, and severe fixed pain in the right side. It was doubtful

doubtful for some time, whether the disease would terminate in phthisis or in a hepatic affection. But the pain suddenly quitted the side, and fixed in the lower part of the abdomen, shooting along the penis, and producing a permanent priapism. The pain was relieved by fomentations and opiates, but the priapism continued without intermission, and when I saw him, had lasted for a fortnight. The pulse was about seventy-five; the functions in general were not disturbed. The complaint lasted, without relief, till his death. Every symptom of irritation in the thorax ceased, on the sudden occurrence of the priapism.

Irregular intermittents have occasioned palpitations of the heart, at their first accession, so violent, as to give suspicion of an organic læsion in that viscus. One mark, by which this case may be distinguished is, that before the palpitation becomes troublesome, or the stroke of the heart so loud as to be heard by another person, the patient always feels a strong sensation of closing in the
region

region of the heart. A farther distinction is, that this sort of palpitation always attacks in paroxysms, though the patient is never free from irregularity in the motions of the heart; and the accession of the paroxysm generally happens in the evening, or early part of the night. In cases of this kind, I have known the convulsion of the heart attended with palpitations in the subclavian and carotid arteries, and sometimes with distressing palpitations of the iliac and femoral arteries, tingling pains shooting to the points of the fingers, and occasional swelling of the face. But the intermittent type still appearing, and the apex of the heart striking in the usual place, I have removed the complaint entirely, by bark, sea-bathing, and exercise on horse-back. Mr. Pomme, in his curious treatise *des Affections Vaporeuses*, says, the hysteric epilepsy may be known, by its occurring at the menstrual periods. I have found it a permanent disease in several instances, and its nature was only to be detected, by the patient's retaining some degree of recollection during the fit, or by the concomitancy of globus hystericus.

Gout

Gout is sometimes converted into rheumatism, when the arthritic tendency to the extremities takes place in very irritable habits. I have known the large joints affected with tumor and inflammation, when, from the sympathy of the stomach with the pained parts, and from the symptoms preceding the seizure of the joints, there could be no doubt of the gouty nature of the disease.

Dyspeptic symptoms are often produced, in the incipient state of pulmonary consumption, and subsist for a considerable time, before any affection of the lungs is indicated, insomuch that a conversion appears to happen, of dyspepsia to phthisis. I believe the affection of the stomach, in such cases, is sympathetic, and affords one of the most intricate examples of masked disease. The origin of this fallacious dyspepsia may be suspected, when there appears more languor than real debility, connected with indigestion, and frequent vomiting of small quantities of pure bile; when the patient is often
liable

liable to torpid oppression, chiefly when the stomach is empty, and when, upon the return of his vivacity, his faculties appear rapidly and considerably improved. There is also great impatience of scenes to which he has been accustomed, and a kind of appetite for travelling. In the mean time, the body wastes, and a short cough, which was almost unheeded at first, becomes more and more troublesome. The expectoration, which appears to consist of nothing but mucus, and from its facility, resembles the spitting familiar to hypochondriacs, encreases gradually in quantity. In this state, I have found the patient liable to violent circumscribed pain in the bowels, a little higher, but more forward than the spine of the ileon.

Another symptom of dyspepsia, frequently deceives even experienced practitioners; this is, a pain in the right side, in the region of the liver, commonly fixed, but sometimes shooting back towards the spine. With this, there is often a slight, but permanent yellow suffusion of the eyes and countenance,
great

great anxiety, frequent distension of the abdomen, and before the returns or exacerbations of pain, the urine is of a bright green colour. The tongue and lips grow dry, and are divided by fissures; the former is covered by a rough bilious crust, and the legs swell slightly in the evening. The pain in the side is sometimes very severe, and is then attended with pain on the top of the right shoulder. These symptoms altogether, give such strong suspicion of an hepatic affection, that it is not to be wondered, if we find cases of this kind too readily treated as such. From careful observation, however, particularly in my own case, when I suffered this complaint several years ago, I have no doubt, that all these symptoms may be produced by acidity in the stomach, and a spasmodic affection of the duodenum, without any organic læsion of the liver. The distinction is, that the pain may be felt to change its place a little, on the expulsion of wind. The pulse likewise is soft, though very irregular. The secretion of mucus from the schneiderian membrane is interrupted, and sometimes nearly

nearly ceases, though the patient feels a frequent inclination to discharge it. He is generally, but not obstinately, constive, and subject to torpor, and nervous oppression. A slight inflammation of the fauces also attends this disorder, returning once in eight or ten days.

The method which I have found most successful in this disorder, is to give repeated small doses of the tinctura alöetica, so as to keep the body rather loose, to use daily exercise on horseback, and to reside in the country, or at least, to avoid sleeping in a town.

Dr. Hoffman has treated this subject with great accuracy, in his little tract, *De Duodeno, multorum malorum causa.*

I have found this pain connected, and apparently convertible with nephritic symptoms; in this case, which was obscure, it continued for several years, without threatening the patient's life, yet there was no

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bilious evacuation, either by urine or stool, and no discharge of gall-stones. I believe that in such cases, a laxative diet, consisting of vegetable food, and of butter-milk largely used, may prove more efficacious than any course of medicine.

The affection of the head, in mixed cases of gout and hysteria, sometimes rises to a degree of paralysis; speech is interrupted, and the power of voluntary motion on one side greatly diminished. But the origin of this kind of palsy is, in general, to be traced, by the presence of globus hystericus, or by involuntary sobbing and weeping having preceded it, at no great distance. In many cases, the gouty irritation, in painful, irregular fits, is converted to hysterical affections, but I have not observed that the gouty paroxysm was shortened, or the pains much relieved, by the hysterical accession.

The prognostics, in conversions of this second class, must evidently vary, according to

to the seat and degree of the supervening disease, and its favourable or unfavourable action upon the original disorder.

III. The original disease, if acute, when it has run its usual course, may leave the habit in a state favourable to the production of another disease; or if the original be a chronic disorder, such a state of the habit may take place during its continuance, and the accessory disease may be simply super-added, or it may vary the form, or affect the duration of the former.

Continued fevers are converted into different diseases, the production of which admits one general explanation. During the increased action of the circulating system, if any part of the body be originally weak, or have been rendered infirm and irritable by preceding disease, congestion and its consequences may be expected there. It is therefore easy to conceive, why one patient should suffer a paralytic affection, another

D 2 phthisis,

phthisis, or a third nephritis, in consequence of tedious cases of typhus. The glandular suppurations, consequent on fevers, seem to depend on the same principle, for although they are represented as critical, by the older medical writers, I have seen a striking proof of the contrary. A middle-aged man had been ill of typhus nearly three weeks, when a parotideal abscess began to form on one side of the face. According to the common opinion, his recovery was to be expected; yet though the abscess burst, and discharged freely, the patient died. The remedies directed against the general symptoms of fever, ought not, therefore, to be suspended on the faith of such appearances, notwithstanding the confidence which authors would teach us to repose in them.

I have seen paralysis supervene to typhus, and prove mortal before the fever had finished its course,* when it appeared after death, that extensive suppuration had taken

* Medical Hist. and Reflect. p. 133.

place in the brain. But, in general, the paralytic symptoms do not appear till the fever has ceased; we have then nothing to apprehend for the patient's life, but we may expect an obstinate disease. I have not often found insanity supervene to typhus, though some alienation of mind is not very uncommon, after long delirium. When maniacal symptoms take place under such circumstances, there is reason to fear that recovery will prove difficult and tedious. I have been startled by Sydenham's direction of copious bleeding in such cases, but I once met with a proof, that repeated bleeding may become necessary, in congestions of the brain, immediately after the expiration of a typhus. J. Coverley, a young man, was attacked by a fever, which had every character of an incipient typhus; there were, particularly, great tremors, violent pain in the head, weak pulse, and tendency to delirium. All these symptoms were removed, in a short time, by the use of bark and wine. He then had a relapse, and again recovered. He continued feeble

D 3 and

and emaciated, and very soon after the retreat of the fever, was seized with excruciating, constant head-ach, and inflammation of the left eye. As the fever had reduced him so much, I hoped to subdue these symptoms by cathartics, opiates, topical bleeding, and blisters. After evacuating his bowels, which were so torpid, that he required large doses of calomel, I gave him Dover's powder in full doses. No relief being obtained by these methods, and finding his pulse oppressed, I directed him to lose ten ounces of blood. Great relief immediately followed, and his pulse become softer and fuller.

The exanthemata are frequently converted into diseases, which become both chronic and dangerous. The small-pox often produce severe coughs, diarrhæa, and ophthalmia. In some rare instances, tumors of the joints supervene, which suppurate, and destroy the patient.* The pneumonic

* Hoffman de Variol. There is a case of this sort very well described in the *Miscellanea Curiosa*.

inflammation,

inflammation, attending the measles, is too often converted into phthisis pulmonalis. Glandular swellings, and general dropsy, frequently succeed the scarlatina anginosa.

In particular seasons, conversions to dropsy succeed most cases of typhus. It does not appear to me, that this conversion is owing to any remarkable degree of debility: possibly it may proceed from congestion in the system of the vena portarum. It happens most frequently among children. In one case of this kind, epilepsy supervened to the dropsy, and destroyed the patient. In another, the patient recovered by the application of blisters, and the internal use of stimulants, after having undergone several epileptic fits, and appearing comatose during their intervals.

There is a curious case in Dr. Percival's Essays, Medical and Experimental,* of a woman, in whom a conversion of fever took

* Vol. 1. p. 148.

place, first into palsy, afterwards into epilepsy, and then into amaurosis. In that instance, the patient recovered; perhaps, because some hysteric commotion had exasperated the alarming symptoms. In men, epileptic fits, occurring when a fever has subsisted for some days, have proved fatal, as far as I have observed. Indeed when it is considered, how often suppuration of the brain has been discovered, in the small number of dissections of persons dead of fever, such conversions must always excite the greatest apprehensions for the fate of the patient.

Such is the tendency to congestion, in typhus, that patients often discharge considerable quantities of blood, by the mouth, nose, bladder, or anus, without much injury. I have known a person, in the second week of a confirmed typhus, when there was great prostration of strength, delirium, and a very feeble pulse, discharge near a pint of pure blood by stool, in the course of one night, with evident relief. The common theory, which

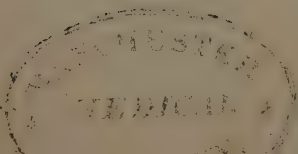
which supposes a dissolved state of the blood, in what are called *putrid* disorders, could not have place in this instance, for none of the usual appearances of putrescency were present. These facts seem to shew, that when local inflammation attends typhus, *topical* bleeding, at least, may be very freely used.

Fevers often terminate in hysterical disorders, especially in women; men too, are sometimes hysterically inclined, upon recovering from typhus, for they experience a capricious disposition to laugh or cry, and a degree of the *globus hystericus*. In women, the affection is characterized by sickness and porraceous vomiting, or by convulsions.*

Nephritis is also a common conversion of continued fever: it seldom supervenes with considerable violence, excepting in persons who have formerly undergone it; but when it has been familiar to the patient, I have commonly seen a very large quantity of

* Medical Hist. and Reflect. p. 119.

gravel



gravel passed, with extraordinary pain, in the state of conversion. The accession of nephritis always extinguishes the fever.

In young men, a swelling and inflammation of one testicle sometimes takes place, and becomes the principal object of attention, towards the close of continued fevers, without affecting the progress of the original disease. I believe suppuration seldom happens, in this conversion, but the affected testicle is sometimes wasted. During one season, I have observed a disposition in most fevers to terminate in inflammation of the eye-lids, nose, and lips, proceeding from one part to another progressively, like erysipelas, though truly of the active kind of inflammation. The eye-lids, and point of the nose suppurated, in some cases.

In 1790, a remarkable conversion happened, in many instances: typhus, of the most malignant kind, terminated in a gangrenous affection of the pudenda, in very
young

young girls.* This conversion proved fatal, in a great majority of cases, notwithstanding the liberal exhibition of wine, bark, and opium.

I have seen typhus converted to an obstinate head-ach, which was cured by blistering behind the ears.

A. B. a middle-aged woman, was sent into our hospital as a lunatic. I found her in a state of insensibility, with a thready, low pulse, her cheeks flushed with a circumscribed red, and her tongue foul. Cordials were administered, but she could not be roused by any method, and she died, a few days after her admission.

Upon opening the head, the vessels on the surface of the brain appeared very turgid; the lateral ventricles were full of water. In different parts of the medullary substance of both hemispheres, tumors were found,

* Medical Hist. and Reflect. p. 133.

of a middling consistence, some of the size of large peas, others about the bigness of a nut; when divided, marks of suppuration were found in their internal substance. One of these tumors nearly filled up the anterior part of the third ventricle; another, the largest of all, was enchased in the substance of the right segment of the pons varolii, which it occupied almost completely.

From the most accurate inquiry, I could not discover that this woman had shewed any remarkable alienation of mind, till within a few days before I saw her. Her symptoms were those of a patient dying of typhus, but there was nothing sufficient to give suspicion of the real cause of death. She had complained of a head-ach for several months, without interrupting her duty as a servant.

Chronic diarrhæa often precedes symptoms of ulceration in the bladder. This may perhaps be reckoned a case of sympathy, but the appearance of conversion is as striking,
as

as in any other instance. A discharge of flatus from the urethra, however, attends this kind of diarrhæa, and should give intimation of the latent disease.

In like manner, chronic diarrhæa and dropsy are familiarly converted to scirrhus of the liver, suppuration of the kidneys, and other organic læsions of the abdominal viscera, which are largely detailed in practical books.

Jaundice is said, by Baglivi, to be converted to tympanites:* I have seen tympanites converted to diarrhæa and ischuria. C. W. a man about fifty years of age, had been affected with a soft, inelastic swelling of the abdomen, a year and a half before he applied to me. When I saw him, it was evidently a confirmed case of tympanites. He was at the same time asthmatic. When he swallowed a mouthful of any spirituous liquor, the swelling of the abdomen began to subside, and in the course of five or ten

* Prax. Medic. p. 375.

minutes

minutes entirely disappeared, without any sensible discharge of flatus: in three or four hours, it rose again to its former height. A vermicular motion of the intestines could be plainly felt, by applying the hand to the abdomen, while the tumor subsided. The distension was relieved by a course of steel and asa-fœtida, with occasional opiates. About a year after he came under my care, he was frequently troubled with a severe diarrhæa, which was soon converted into a painful discharge of bloody urine, and sometimes even a total suppression of that evacuation. From these complaints he was relieved, by the free use of camphor and opium in conjunction, but they returned frequently during the ensuing half-year, and at last confined him to his bed. The ultimate conversion now appeared: his right leg and thigh swelled, and inflamed with great pain, and gangrene and death soon followed.

At different periods of his complaints, the size of the abdomen had varied greatly. It was

was sometimes little more than natural, but no connection could be traced between this circumstance, and the conversions of his disorder. The singular phænomenon of the sudden decrease of the swelling, could be produced, almost to the last.

On opening the body, I was surprized to see no omentum, for the subject was very fat; on diligent search, it was found that the omentum was pushed up into a sac formed by the diaphragm, and actually lay within the thorax, on the right side; as this sac, which was large enough to contain the hand, had a very small neck, the omentum was not brought down again without force. The caput cæcum, and transverse arch of the colon were in a state of very great distention; the other parts of the intestinal canal appeared sound. The kidneys were not much enlarged, but entirely diseased: their external surface was covered with watery vesicles, under which we found deep, circular ulcers, which could have contained a large pea. Internally, the kidneys were inflamed and
ulcerated,

ulcerated, in their whole substance. The liver was sound, but the gall-bladder was full of gall-stones, which, Baglivi remarks, he always found very numerous, in persons dead of tympanites.

This dissection throws no light on the singular fact, of the occasional removal of the distention. The ischuria was perfectly accounted for; probably the diarrhæa was a sympathetic affection, produced by the state of the kidneys. The hernia of the diaphragm, here detected, has not, I believe, been described before.

Dyspeptic complaints, of long standing, are often converted to general dropsy, especially when they are accompanied by chronic pain of the stomach. Ascites is frequently converted to chronic inflammation of the bowels and diarrhæa, which generally prove fatal.*

* Med. Hist. and Reflect. p. 97. and seq.

Maniacal complaints, after continuing for several years, often terminate fatally with epileptic fits, as Dr. Mead has observed. In opening several patients, who have died in this manner, I have found the lateral ventricles of the brain turgid with water, and such a general fulness of the blood-vessels of the brain, that they appeared as if artificially injected. It was difficult to determine, whether there was any unusual hardness of the brain in those cases, but all the parts appeared uncommonly distinct and sharp.

Dr. Mead has noticed two remarkable conversions one of which extinguished, and the other retarded, a dangerous complaint. A young lady, in the last stage of a dropsy, was seized with a fit of insanity, during which she bore the action of powerful hydragogues, which removed at once her mental and bodily disease. Another lady, affected with all the symptoms of confirmed consumption, was suddenly impressed with religious melancholy, which removed every phthisical

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symptom for three months, but the original disease then returned, and proved fatal.*

I have seen a patient, who had long been in a brutal state of insanity, seized with a pleurisy, and have found him more clear and consistent in his answers than usual. But I have known another maniacal patient, not so completely deranged, undergo a very painful operation, without any immediate effect upon the mind.

In one maniacal case, which succeeded an ill-treated typhus, the patient received no relief from medicines, till a broad, yellow, scurfy eruption appeared about the crown of his head, which was bald. Successive crops of these eruptions delivered him completely from all remains of his mental disorder.

Typhus, and the cynanche maligna are sometimes reciprocally converted, when both are epidemical. The cynanche has been

* Mead de Insania.

converted

converted to general dropsy, even before the ulcerations in the fauces disappeared.

IV. Conversions may arise, when a disease, regular in its usual course, or long familiar to the habit, is violently terminated by improper methods, or suddenly extinguished by accidental circumstances.

I have noticed elsewhere,* a remarkable case, in which epileptic fits were produced by the retrocession of the itch, in consequence of some external application. In that case, the epilepsy resisted all the usual methods, and was only cured by reproducing the itch.

Instances of the production of melancholy and madness, by the suppression of eruptions, or the healing of old ulcers, and habitual drains, are common in practical writers. The diseases originating from the suppression of the menstrual and hæmorrhoidal discharges, are also well explained in different books.

* Med. Hist. and Reflect. p. 183, 184.

Dr. Hoffman's treatise *de Morborum Transmutatione*, relates almost entirely to this class of disorders.

I am inclined to consider the puerperal mania, as a case of conversion. During gestation, and after delivery, when the milk begins to flow, the balance of the circulation is so greatly disturbed, as to be liable to much disorder from the application of any exciting cause. If, therefore, cold affecting the head, violent noises, want of sleep, or uneasy thoughts, distress a puerperal patient, before the determination of blood to the breasts is regularly made, the impetus may be readily converted to the head, and produce either hysteria, or insanity, according to its force, and the nature of the occasional cause.

In the following case, which fell lately under my observation, the most alarming conversions happened, in consequence of the moveable inequality of circulation. J. G. a young man, of a full habit, after a fall on his

his right side, was affected with a cough, and occasional spitting of blood. When he came under my care, he had every appearance of phthisis, except emaciation. He sometimes passed small quantities of blood, both by stool and urine. After three or four months, the phthisical symptoms abated considerably, and he began to complain of a severe, fixed head-ach; in a short time, he became paralytic on the left side. From these symptoms he was gradually freed, by repeated bleedings and blisters. A violent pain then attacked him under the left breast, without renewing his cough, which was followed by an irregular train of complaints, that did not point to any particular disease. At length, he began to swell, round the lower part of the trunk of the body, and there was reason to believe, that a large quantity of matter was forming in the cellular membrane. Not long after, a disease in the vertebræ of the back began to shew itself. His lower limbs were now become entirely paralytic. After languishing in this state for a considerable time, he was seized with a purging of pure pus,

E 3 which

which continued for two days, and completely reduced the swelling, but left him so weak, that his death was hourly expected. —I had not an opportunity of knowing the event of this case.

The following case much resembles the preceding.

A young man, sixteen years of age, after a fall on his side, had symptoms of general rheumatism, which were removed by the use of Dover's powder, and other sudorifics. Some months afterwards, he was seized with violent pain of the head, which recurred every third day, and with pain and swellings in the left elbow, and in both wrists: the swellings of the wrists appeared to be in the bursæ mucosæ. His pulse was quick and frequent. He was put on a course of calomel, digitalis and opium. Phthisical symptoms then appeared, which were relieved by the myrrh-mixture, steel, and opium. His cheeks now swelled, became hard, and at length an opening took place, in

in a pimple on the right cheek, and a considerable quantity of pus was discharged, with great relief to the head and lungs. This discharge recurred frequently, and always with great temporary abatement of the head-ach and cough. It should be mentioned, that before this evacuation, the head-ach had been always so severe as to confine him to bed, while it lasted.

By the advice of Dr. Percival and myself, the patient was sent to Clifton. After his arrival there, two of the dentes molares of the under-jaw, on the left side, became loose, and upon their extraction a large quantity of pus was discharged from their sockets, and the head-ach, as we were informed, entirely left him. After a stay of some weeks at Clifton, he returned home, completely hectic, but the head-ach was now trifling, and the swellings of the wrists were gone. He died in convulsions, soon after his return.

In this case, the variation of the symptoms evidently depended on the translation of

pus, from one of the viscera to another, though the antra maxillaria contained the principal deposit.

I once witnessed a conversion of apoplexy to insanity, which strongly reminded me of a line in Horace :

Ut lethargiis hic, cum fit pugil, et medicum urget.

An elderly man had an apoplectic fit, on the third day of which I was called to him. He lay quite insensible, with much stertor, and a variable pulse. I directed cold water to be applied to the head, with as little interruption as possible. Some signs of recollection appeared; but nothing decisive, till the next evening, when he suddenly rose from his bed, drove his servant and one of his relations out of the room, with much vociferation, and locked himself in. He was secured, with some trouble, and continued to talk, and exert himself violently, but his mind was completely deranged. He began to recover, upon ulceration of his gums taking place, in consequence of a course

course of calomel, and by supporting a gentle ptyalism his mind was almost completely restored.

Tedious dyspeptic cases are often converted to cutaneous eruptions, in distinct pimples, of a fiery red colour; such eruptions extinguish the complaint in the stomach.

A very obscure, and unpleasant case occurred to me, about a year and a half ago, which proved ultimately useful, by detecting a disease, more frequent perhaps than has been supposed.

A young man, of irregular and intemperate habits, particularly addicted to the use of spirituous liquors, was seized with violent pain in the region of the liver, and various symptoms which indicated a bilious affection. The pain abated by the use of calomel and opium, and he appeared, in a few days, to be in a state of recovery. Contrary to my express injunctions, he went out, in a winter-day, and afterwards received
some



some of his friends at home. He underwent a severe return of pain, which affected his breathing, and obliged him to press on the region of the liver with his right hand. I found him in this state about eight o'clock in the evening, and directed an anodyne draught, with thirty drops of laudanum, to be given immediately, and to be repeated once or twice, according to circumstances, in the course of the night. He took the first draught soon after, and finding no relief, took the second about eleven o'clock. He felt himself much relieved after swallowing it, but soon had a return of pain, and expired suddenly. Under such circumstances, it may be supposed that I was very anxious to obtain an inspection of the body; and in compliance with my solicitations, it was carefully examined by Mr. Gibson. The liver was found perfectly sound, and the stomach appeared healthy externally. But on examining its inner surface, we found an erysipelatous eruption, near the pylorus, in different stages.

In

In one place, the spots had nearly disappeared, in another, gangrene had taken place; and it was evident that the successive appearance of these crops of pustules had occasioned the returns of pain, and that the rapid mortification of the most recent pustules had produced the unexpected fatal event.

Lieutaud mentions several appearances of a similar nature. *Histor. Anatomico-Medic.* tom. 1. p. 23.

It appears from this case, that the cuticle lining the stomach, is liable to similar diseases with that which covers the surface of the body. In chronic disorders of this organ, the existence of eruptions will therefore become an important object of consideration. The seat of pain, in this case, gave rise to a fallacious opinion respecting the seat of the disease, for it lay directly under the concavity of the right lobe of the liver. I do not believe that any degree of attention could
have

have detected the truth, in the first instance, for there was no vomiting, nor was there any morbid sensibility to the temperature of liquids received into the stomach.

If dyspepsia be ever occasioned by eruptions on the cuticle of the stomach, the remark in the foregoing paragraph will admit a very ready explanation.

The hernia humoralis, occasioned by a premature suppression of gonorrhæa, may be properly reckoned a case of conversion. I have been informed, that this affection of the testicle has been known to baffle every means of relief, and that the practitioner found it necessary to inoculate the patient for a fresh gonorrhæa. The return of the running, and ardor urinæ, it was said, entirely removed the disease of the testicle.

Three remarkable cases of conversion, in consequence of suppressing mercurial salivations, are mentioned by Dr. Silvester, in the

Medical

Medical Observations and Inquiries.* In one, violent pains in the joints, in another, a fixed head-ach, in a third, a vomiting of every thing swallowed, during three months, took place. I have known hermoptœ and consumption follow exposure to cold, when the body was charged with mercury. The effects of mercury, in large doses, have been little known, comparatively, since the dangerous practice prevailed, of trusting the cure of lues to slight courses of that medicine. I have seen tremors, so universal, that they seemed to affect every individual muscular fibre in the body, supervene on its large, and long-continued use, when siphylis had been rooted in the habit, by a too sparing previous exhibition. In another case, I have known mercury so imprudently given, and with so little attention to the progress of the disease, that when the mercurial ulceration took place in the tonsils, it was supposed that the patient was relapsing, and a fresh load of mercury was thrown in, with the effect of

* Vol. 3, p. 241.

producing

producing racking pains in the bowels, fever, and bloody purging.

The mercurial hectic, which may justly be reckoned a case of conversion, is not only alarming in itself, by ruining the powers of digestion, but in its tendency to produce melancholy, and total derangement of the faculties.

De Castro mentions a conversion from dropsy to epilepsy, of which I have seen no instance, but which is confirmed by a case of Lieutaud's.* The ventricles of the brain are often loaded with water in hydropic patients, at every age. In fatal cases of ischuria, when the patient dies comatose, it is well known that the ventricles of the brain are filled with a fluid, which has the sensible qualities of urine. This is a real conversion to apoplexy.

I shall remark, by the way, that in diabetic patients, the pathological rule respecting the

* De Hydrop. Epigen.

conversions of determination between the skin and the kidneys, does not always hold good. In two cases of diabetes, the patients have complained of profuse sweats, at a time when the discharge of urine was most considerable.

In the cases which I have seen, dyspeptic symptoms have always preceded this disorder, and it has been attended with great emaciation, and every appearance of general debility. Dr. Sydenham seems to have regarded it, as always dependant on such a state.*

The diseases produced by the improper suppression of gout, whether from the imprudent use of tonics, such as the *Portland Powder*, or from too sudden an adoption of low diet, are too well known to require particular consideration here. While gouty symptoms are so directly produced by a certain state of the passions, it is vain to

* Epidemic Diseases from 1675 to 1680.

direct

direct our attention to corporeal remedies only; and it happens unfortunately, that an exemption from care and solicitude, the great sources of arthritic complaints, is, in this life, unattainable. Under uneasy circumstances of mind, gout will arise in persons strictly temperate and virtuous, active, free from hereditary pre-disposition, and in every respect qualified to claim an exemption, from this great scourge of anxious refinement, and artificial society.

Anomalous cases of conversion may be multiplied infinitely, not only by the combination of the different circumstances already mentioned, but by the modes of treatment adopted by practitioners. Slight cases of synochus are often converted to typhus, intermittents to continued fevers, and pneumonic inflammation to phthisis, by the improper practice of medical men. On this delicate subject, Dr. Hoffman has written a short essay, entitled, *Medici Morborum Causa*, which may be perused with advantage.

There

There are few diseases, in which the effects of injudicious practice are more apparent, or more distressing, than in rheumatism. I have repeatedly seen the patient's strength worn out, by pushing contrary methods to excess, when the practitioner has shed torrents of blood one day, and has endeavoured to repair the consequent sinking, by pouring in the most mischievous cordials on the next; while the pain, instead of abating, has become more agonizing. I have seen the plan of bleeding and low diet carried on, till the patient became dropsical, without obtaining any relief from pain; in other cases, I have known the pains fixed for life, by an untimely exhibition of bark. I have known extenuation of the whole body, and palsy of the extremities, supervene to a common rheumatic attack, which might have been readily overcome by proper treatment. These conversions are particularly frequent among the poor, in remote parts of the country. In such cases of great emaciation, and loss of voluntary motion, combined with constant pain, nothing an-

VOL. II. F answers

swers better than a course of ling-liver oil, which has long been a popular remedy in our infirmary. I am inclined to think, that this remedy operates, in a great measure, by encreasing the deposition of fat in the cellular membrane, for I have invariably observed that it is slow in relieving, that patients acquire a considerable degree of corpulence as their recovery proceeds, and that an encrease of plumpness is always evident, before the pains diminish remarkably,

The lives of many hysterical and hypochondriacal patients have been at once shortened and embittered, by the thoughtless encouragement, which some practitioners give to the use of spirituous liquours. I have seen most melancholy instances, in which habits of dram-drinking have been thus acquired, under the sanction of the medical attendant, by persons, not only temperate, but originally delicate in their moral habits. In this manner, hysterical disorders of no great moment, are converted to scirrhus of the liver and dropsy, to apoplexy, palsy, and other fatal diseases. I have

I have known a chlorotic palpitation of the heart treated as a dilatation, though the apex of the heart was found to strike in the usual place; frequent small bleedings and low diet were enjoined, and this method was pursued till anasarca supervened, and the patient's strength was completely exhausted.

Sed Manum de tabula.

In cases of internal suppuration, the removal of pus from one cavity to another, from the knee-joint, for instance, to the cavity of the peritoneum, is popularly called a metastasis, and described in every treatise of general surgery.

In the *Miscellanea Curiosa*, a case is related, in which epilepsy was cured by conversion to a quartan.*

Conversions of the different species of inflammation into each other (a neglected subject of great importance) belong, perhaps, to

* Ann. 1695-6, p. 34.

this head, as there seems little regularity in the process. I have found active inflammation in the tonsils combined with the scarlatina anginosa, in several cases: when ulceration had begun on the surface of the tonsil, after the appearance of the scarlet efflorescence, the body of the tonsil has inflamed and swelled, the ulcerative process has been stopped; genuine inflammation has appeared, and suppuration has followed. The ulcers have sometimes been extinguished by this occurrence; sometimes they proceeded, when the suppuration of the other part of the gland had run its course.

Diseases produced by independent causes, when they coincide in the same patient, although they are not mutually convertible, may yet influence each other in some degree, so that the accession of one may be retarded. Thus, when the contagions of the measles and small-pox have been applied about the same time, to a person predisposed, the disease first communicated has run its course, and then the

the second disease has taken place, though at a later period than that in which its contagion usually takes effect. There are other contagious diseases which may subsist together, without affecting each other in any respect. It has never been observed, in armies, that the presence of the venereal disease prevented attacks of dysentery; and it is known that hydrophobia, which so powerfully agitates every fibre of the system, has not produced any alteration in a virulent gonorrhoea, with which an unhappy sufferer was at the same time affected.

A case lately occurred to me, however, in which nodes on the skin-bones, and venereal pains in the heels came on, immediately after a fit of acute rheumatism, in consequence of a pox contracted several months before.

There are some cases in which two diseases subsist together, without any apparent connection, although one of them be really produced by the other; and from a want of

facts upon this subject, the relation can only be traced by dissection after death. I shall give a case of this kind, at some length, because the symptoms were of the most delusive kind, and calculated to inspire false notions of the disorder. If it be properly considered, it will be found to convey very important cautions.

S. S. a boy, three years of age, was seized with a fever, then epidemic, on the 10th of Sept. 1794. I saw him three weeks afterwards. With the common febrile symptoms, he had a considerable degree of anasarca, which affected more especially his face, and lower extremities. He had no cough, no difficulty of breathing, nor pain in his breast, and I could not find, from the most careful enquiry, that he had ever made such complaints. There was great paleness over the whole skin. He was torpid, without delirium, or the symptoms of oppression common in typhus. About the eleventh of October, he complained of pain in the lower part of
the

the abdomen; on the twelfth, violent palpitations of the heart, and in the arteries on the neck, supervened, and he died on the thirteenth.

Upon opening the body, we found water effused under the dura mater, and the pia mater was distended with water. The blood-vessels of the brain appeared full, but there was no other morbid appearance in the head. In the abdomen, the liver was unusually large, but otherwise sound; the gall-bladder was much distended; the kidneys were enlarged, but not diseased; and there was rather more fluid than usual in the cavity of the peritoneum. In the thorax, there was great disease. The pleura adhered strongly to the ribs, all round, and on the right side was inseparably united to the part covering the lungs. There was an inflammatory exudation over the whole surface of the pleura. A small quantity of fluid was effused, on the left side. The pericardium was filled with water. The heart was sound, but the left

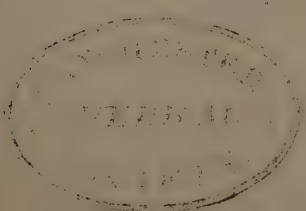
auricle was very small, and shrivelled. The right auricle was somewhat larger than usual.

In this case, an active inflammation through the whole extent of the pleura, producing exsudation and adhesions, was not indicated by any symptom, during the continuance of the complaint. The anasarca might be originally produced, by the remote causes of the fever and pneumonic inflammation, but it was apparently encreased, at least, and supported by the obstacles to circulation, which the state of the lungs and pleura presented, particularly after the formation of the adhesions. Both parents assured me, that the anasarca appeared at the same time with the fever. This affords, therefore, a striking example of those insidious cases, in which the principal disease does not produce its proper symptoms, but proceeds under the mask of another disorder, not usually connected with it during its active state. A succession of blisters would be a probable method of relieving such affections, and might

might be used with advantage when the fever languishes, like this, (without pointing to any particular cause of protraction) even in lower degrees of inflammation. Indeed, the conjunction of so general an anasarca, with any fever which does not appear an exquisite typhus, in the first days, must give suspicion of partial plethora, or congestion, in some part of the system, and excite attention to the slightest inflammatory symptom. The palpitations of the heart, which only supervened within the last two days, were probably owing to the firm adhesion of the pleura lining the ribs, to that covering the right lobe of the lungs, which impeded both circulation and respiration, and to the encreasing effusion of fluid into the pericardium.

The pain in the abdomen, which I have often remarked in dilatations, and inflammatory affections of the heart, was present here, but was not so violent, nor of such duration, as to afford suspicion of disease in the thorax.

In



In every case of fever, attended with unusual appearances, the practitioner ought to be aware, that the symptoms which force themselves on his attention, do not always form the whole, nor the most formidable part of the disease: he must, under such circumstances, keep the remotest causes and consequences in view, and rather risk something officious, such as the application of blisters, when no local pain, or injury of functions seems to demand them, than suffer the patient to be destroyed, without making an effort for his preservation.

As there was no vomiting, in this case, I do not think it could be properly named a peripneumonia notha, conjoined with typhus. But this fact, with many others, which it is unnecessary to mention here, proves that the lungs, as well as the heart and liver, may suffer irremediably, from lingering, imperceptible, yet destructive inflammation.*

Since

* A very similar case is to be found in Lieutaud. Obs. 384. *Juvenis duodetriginta annorum, leucophlegmatia laborans, inter remedia huic morbo dicata, repentina morte tollitur.*

Since the description of this case, I have been fortunate enough to detect the nature of this complaint, in several instances, and to produce cures, by a rapid succession of blisters, applied to the thorax and sides.

From these facts, many important conclusions may be drawn, respecting the prognostics and cure of diseases. The subject is capable of admitting very extensive research, but considering this paper as a slight sketch only, indicating what may be done by other observers, I shall content myself with some of the most obvious deductions.

1. Whenever local inflammation supervenes to an acute disease, it shortens or extinguishes the original disorder. Hence one great source of perplexity, in such cases as that of S. S. (p. 60) where the inflammation does not betray itself by its proper symptoms,

Thorax sinister pure replētus invenitur, nullis fermè manentibus pulmonis reliquiis. Non tussiebat æger, in utrumque latus decumbebat: nullum, uno verbo, fuerat morbi pectoris indicium, quod sane mirari subit.

Histor. Anat. Med. tom. 1. p. 534.

yet

yet the feverish symptoms cease, or at least are greatly mitigated by the conversion.

An important rule in practice may be formed, from this observation. In those alarming cases, where pneumatic inflammation supervenes to synochus, or typhus, the cure of the fever may be in a great measure trusted to the supervening disease, and our attention may be chiefly directed to the progress of the inflammation. By this means, contra-indications will be avoided, and the safety of the patient will be better consulted, than by the temporizing practice usually adopted on such occasions. The danger, or salubrity of this conversion, appears to depend greatly on the nature of the part attacked by inflammation. If it be a conglobate, or conglomerate gland, the fever is often,* though not constantly, extinguished without hazard; but if the brain, the pleura, or peritoneum are inflamed, whatever be-

* It will appear, from the case mentioned in p. 32, that the existence of an external inflammation should not induce practitioners to neglect the fever; indeed, no perplexity, nor contra-indication need arise from it.

comes

comes of the fever, the importance of those parts to life, renders the progress of inflammation in them highly dangerous.

It is easy to explain from hence, why in patients, who die in typhus, of suppuration in the brain, the fever often seems at a stand, for some days before death; at least the patient, to an incautious observer, appears not materially worse. The original fever is mitigated, in proportion to the advance of a fatal inflammation. In like manner, the encreased energy of the brain, produced in mania, relieves, or cures dropsy, and other diseases, depending on a want of action in the system.

This deduction serves also to explain the action of blisters, which, by producing local inflammation, imitate the process, and in proportion to their action, exhibit the effect, of this kind of conversion.

Hence also, the salubrity of the gouty inflammation, when it seizes a part not necessary

sary to life. This differs from other kinds of inflammation, in its power of extinguishing chronic diseases, such as dyspepsia, or nephritis of long standing. May we conclude from this circumstance, that attempts to excite inflammation in chronic disorders, either by blisters, or rubefacients, ought to be more frequently made, and more varied, than is usual in the present practice?

It must be added, that general fever sometimes cures local inflammation; Mr. HUNTER says, he has seen a gonorrhœa extinguished, by the accession of a fever. Some facts of this sort appear to have impressed the mind of that excellent observer, and to have given him a confused idea of the existence of conversion. But his theory of the incompatibility of similar morbid actions, in the living body, amounts to nothing more than a recital of facts, in abstract terms. It is too common, for modern philosophers to mistake such recitals, for the investigation of causes. When we consider, that, besides the facts respecting general fever, there are many
unexpected

unexpected and dangerous conversions, in the class of exanthemata, from the eruptions, after they have been completed, to inflammation of the internal parts: that in erysipelas. we are not yet acquainted with all the circumstances, under which inflammation is translated from the skin to the brain; and that the translation of pus from its original seat, to a distant part of the body, is not yet reduced to any rules, from which we may learn to expect it; we perceive, at once, a great deficiency in medical science, and a train of enquiry, equally curious and useful.

The histories of several chronic diseases, are absolutely cases of conversion: to be convinced of this, we need only to refer to SYDENHAM's descriptions of hysteria and gout. The numerous tribe of disorders, occasioned by alterations in the structure of the abdominal viscera, exhibit similar phænomena. Scirrhus obstructions of the mesenteric glands shall present the appearance of colic, or dyspepsia, while scirrhus of the liver is masked
under

under symptoms of jaundice or dropsy. When we find so many acute diseases convertible into each other, it seems not impossible, that by investigating their connections in this respect, an unity of cause may be discovered, among affections, which, at present, appear essentially different, and that new light may be thus thrown, on the most obscure doctrines of pathology.

2. The convulsion denominated hysterical, when it seizes the muscular fibre, in cases of conversion, is always salutary, and may be regarded, in many instances, as the crisis of chronic diseases. There is great similarity in the effects of *electricity*, excepting that its action is momentary; and when it is considered, that the movements which it produces, in paralytic limbs, are truly convulsive, it seems not improbable, that its advantages arise, from its exciting a transitory effort of that nature. The more permanent action of internal stimulants and tonics, may be supposed to excite the convulsive effort, in a
still

still lower degree, which may be illustrated, by considering the effects of arsenic, in different doses: a few grains of that mineral, are capable of producing the most fatal convulsions; the sixteenth part of a grain, repeated at proper intervals, operates as a safe and beneficial tonic.

The accession of epilepsy, it is said, has cured an intermittent of long standing; the same effect has resulted from the cold bath, which gives a strong momentary shock to the brain. Convulsive movements appear to be most useful, by destroying morbid actions, which have been perpetuated by habit. Hence the utility of cold bathing, in lingering cases of typhus, where the usual stimulants have lost their effects. In inflammatory diseases, the accession of convulsions, or spasm, is commonly dangerous; as in the inflammation of the gums, and symptomatic fever, attending dentition; indeed, the conversion of a strong irritation, from any part of the system to the brain, is always hazardous. This is

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evident from the consequences of conversions of inflammation, from the lungs to the head, in pneumonic cases, or from the skin to the head, in erysipelas, and in many instances of retroceding, or misplaced gout. Considered under this point of view, the analogy between the effect of these conversions, and that of tonic and stimulant remedies, in like circumstances, becomes very striking and instructive. It must be observed, that no good effect is derived, from the accession of a stronger, or more general convulsion, or spasm, to one weaker, or more partial; as when epilepsy succeeds to chorea, or tetanus to trismus. But to all these cases, the hysterical convulsion must be understood to form an exception; for I apprehend, we are not yet sufficiently acquainted with its influence on the progress of diseases, to set any limits to its action.

3. It is so far certain, that medicines operate by producing conversions, that we perceive very considerable diseases resulting from

from the use of certain remedies, such as mercury; and we judge of the extinction of the original complaint, in some measure, by the encrease and permanency of the remedial disease. I have mentioned a case (p. 51) in which the mercurial ulceration of the tonsils was so great, that a practitioner mistook it for the venereal ulcer; and Mr. Hunter has given several cases, where the mercurial ulceration had out-lasting every symptom of lues, and proved an intractable complaint. In like manner, Dr. Darwin has observed, in his *ZOONOMIA*, that some derangements of mind cannot be removed, without exciting an artificial delirium, by means of opiates.

When we give diuretics, or cathartics, in dropsy, we endeavour to excite a disease in the intestines, or kidneys; for an extreme increase of natural action, in any part, is certainly morbid. A conversion of ascites to diarrhæa, and to chronic inflammation of the intestines, is, in reality, a common occurrence, and almost always fatal. We should

learn from this fact, to avoid the use of irritating purgatives, or at least not to employ them familiarly, in cases of ascites.

To ascertain the diseases, produced by the long use of particular remedies, would be an object of considerable utility. We know, already, the mercurial hectic, the dyspepsia, arising from the too familiar employment of tonics, the apoplexy, produced by the imprudent use of cold bathing, and the phrenzy occasioned, under particular circumstances, by the use of warm mineral springs. But we possess these, only as detached facts, from which no general conclusions can be formed; and since the mischievous prejudices against bark and opium have been exploded, we have, perhaps, erred on the contrary side, by supposing the general action of medicines to be salutary in itself, and consequently, by neglecting to investigate their ultimate effects on the constitution.

4. It may be regarded as a general rule,
that

that internal inflammation, supervening to chronic diseases, while it is equally dangerous with a similar conversion of acute disorders, has less tendency to extinguish the original complaint. Thus inflammation of the pericardium, is frequently discovered, in dissections of persons who die of general dropsy,* or of other chronic complaints, in which the affection of the pericardium seems to be a casual conversion, which, indeed, hastens death, but does not arise from any necessary connection with the original complaint, or with its usual conversion. Thus, pneumonic inflammation, supervening to intermittents, runs its course without extinguishing, or changing the type of the fever.†

I have already noticed the conversion of dropsy, to inflammation of the bowels: chronic inflammation of the liver seems, also, to

* Lieutaud Hist. Anat. Med. t. 11. p. 19, 72, 73, 74, 75, obs. 469, 470, 695, 696, 697, 698, 699, 700, 701. See also the whole sections, p. 66, 67.

† Bonet. Sepulch. p. 1428.

form the termination of some lingering dyspeptic complaints, but the train of symptoms, from which it may be expected, is not yet ascertained.

Even the gouty inflammation, when it seizes an internal part, loses its salutary tendency, and assumes the most dangerous form, consistent with the symptoms proper to inflammatory affections of the particular organ attacked, without pointing to any curative conversion.

5. Cutaneous eruptions often extinguish dangerous diseases. Excepting the regular exanthemata, such conversions seldom happen in acute disorders; I have known acute rheumatism accompanied, in two cases, with efflorescences on the legs, but they seemed to have no effect on the pains. Madness and melancholy, epilepsy, delirium, protracted after fever, dyspepsia, various pulmonary affections, are all observed to be mitigated, or removed, on the appearance of cutaneous disorders;

disorders; especially on the return of those, which, after becoming familiar, had been suddenly suppressed.

In electrifying patients for obstinate cases of palsy, I have often remarked, that the patient received no benefit, till red, fiery eruptions were produced, on those parts of the limb which were surrounded by the chain.

Some practitioners have imagined, that much could be done, by producing crops of pustules on the surface by stimulant applications, in diseases of the lungs and the joints. My experience of this method furnishes no proof of its efficacy.

Perhaps, as I have suggested elsewhere, a specific eruption is requisite, in such cases, more frequently than we are aware.

In general, there is no safer conversion than that to the skin; the distance of the affected part from those necessary to life; the

varieties in the state of circulation, to which it is habituated, and the easy application of external remedies which it admits, combine for the security of the patient, whenever a disease is fully translated to the skin. Sudden conversions from the skin to the internal parts, are, I believe, universally dangerous, whether they interrupt the course of an acute, or a chronic disease.

Some affections of the skin, though they happen in consequence of acute diseases, seem to have no effect on the original complaint; such are, petechiæ in typhus,

In the second case, published in the *Medical Histories and Reflections*, there is a curious instance of connection between an erythematous state of the skin, and convulsions, attended with racking pain in the stomach.

6. Respecting hæmorrhages, I have nothing to add to the observations of former writers; for abundant pains have been bestowed

stowed on conversions, arising from inequality of circulation. It may be proper to repeat, that the presence or absence of the hysterical effort, materially affects the prognosis, in all cases of hæmorrhage.

Old men not unfrequently die, after discharging blood from the urethra, for some days. This appears to happen from ulceration, or other disease, in the kidneys.*

7. As it appears, that many conversions are processes, instituted by nature for the cure of diseases, and that some of the most active remedies operate in a similar manner, we may not only improve the history of diseases, but the practice of medicine, by paying closer attention to the connection, and operation of disorders upon each other. With this view of the subject, the most complicated cases will admit an instructive developement, and every additional fact may find an useful place.

* Licutaud. Hist. Med. Anatom. t. 1. p. 249 and 258.

In pursuing this train of observation, we may be confident, that we are really following the order of nature, and that the result will be, not an arbitrary system, but an accession of solid, and applicable knowledge. Thus a foundation may be laid, for a natural arrangement of diseases, and a just theory of the sensitive motions of the human system: splendid objects for the ambition of another age, to which we can only hope to contribute a few materials !

Thus a check may be given, also, to the unprofitable custom of publishing single cases, which, some rare instances excepted, are of little more public utility, than the moral tales of a monthly magazine.

The accession of epilepsy to dropsy, noticed at p. 55, was inserted on the occurrence of the case, after this essay was ready for the press. This will explain a seeming contradiction in p. 78, which I had neglected to alter.

OF INSANITY.

Vestibulum ante ipsum

Luctus et ultrices posuere cubilia curæ. Virg.

OF INSANITY.

THERE are few subjects on which information is more ardently desired, or more difficult to be communicated, than this of insanity. The philosophical consideration of the causes and symptoms of this disease, involves the most intricate operations of intellect, and the ideas of them obtained by the most patient and laborious attention, require talents far beyond the usual standard of merit, for their expression. Those who would gain a knowledge of the symptoms of madness from books, more particular than that afforded by ARETÆUS, must consult SHAKESPEAR and RICHARDSON; as the Greek physician learned the signs of love from the verses of SAPPHO. From a want of that exquisite
discernment

discernment in the traces of character, which rather qualifies a man for the composition of poetry or romance, than for pathological discussion, some medical writers have limited their arrangement of mental disorders too narrowly, while others have extended the empire of insanity to so many transitory excesses of passion, as to share with DAMASIPPUS in the ridicule of supporting the old stoical paradox.

Before a comprehensive view of this subject can be obtained, it will be necessary for those who are accustomed to see insane persons, to communicate the result of their observations simply, according to the impression they receive, without referring to a system, or hoping for one. To this must be added frequent inspections of the dead, which continually present so many unexpected appearances, and render our views in prognostics at once extensive and cautious. I proceed to mention a very few detached facts, in conformity to this plan.

In

In maniacal cases, false perception, and consequently confusion of ideas, is always a leading circumstance; as far as I could ever learn from maniacs, surrounding objects appear to them to be on fire, at the beginning of their disorders; and like wild animals, they are sometimes disagreeably affected by particular colours, which excite their indignation to a violent degree. In consequence of these sensations, added to their own hurry and confusion of thought, they are by turns timid and outrageous. When a lunatic attempts to strike, it is generally by surprise, or when he expects no resistance; a determined opposition disarms him:

“Man but a rush against Othello’s breast

“And he retires.”—

The confusion of thought may be traced in all its degrees, in different cases, from a want of the common power of concluding, to an inability of completing a single sentence. In many maniacal cases, the disease seems to consist in incitation, and, as it were, inflammation

mation of thought, so that the mind is not allowed leisure to form any judgment concerning the ideas presented. A similar state of the faculties is experienced, on the morning succeeding a debauch in wine. In other cases, every past idea is recollected with great accuracy, and the patient repeats long trains of occurrences, or of arguments, either in soliloquy, or in reply to something said by the attendants. I have often witnessed astonishing exertions of memory, carried on in this manner, for several hours without interruption. There appears, in such cases, little more incoherence than would be found in the discourse of a rational person, if he were to utter all his ideas aloud, without reserve.

There are inferior degrees of mania, in which the patient preserves a strong command over himself, though disposed to use violence against individuals. I have seen a maniac, after committing a single outrage, master himself so completely, that no signs of his disorder could be detected during six months

months confinement; but from the moment that a sally of passion threw him off his guard, he became furious and ungovernable.

Even in the frantic state, attention and memory are not always abolished; a furious maniac will sometimes throw out a smart retort upon those who address him, which proves that he knows his own situation, and that of his attendants.

The obstinacy of false perception, once admitted, is incorrigible. A maniac, confined in a house situated on a small brook, fancied himself the owner of several vessels which were daily expected in port. Though he saw patients who were allowed more liberty, step over the brook many times in the day, he always rose when the moon shone, to see whether his ships had entered the river. Upon similar occasions, persons unaccustomed to lunatics, expect to do some service, by trying to convince them of their error; but the attempt is always unavailing; the patient

VOL. II. H will

will even admit some distinction, yet recur to his favourite idea. A gentleman now under my care, believes himself to be of royal extraction; when I accost him by name, he says, that to his physician he is indeed Mr. —, but to all others he is the prince-royal of Spain, and from them he expects the ceremonies due to his birth.

When lunatics attempt to write, there is a perpetual recurrence of one or two favourite ideas, intermixed with phrases which convey scarcely any meaning, either separately, or in connection with the other parts. It would be a hard task for a man of common understanding, to put such rhapsodies into any intelligible form, yet patients will run their ideas in the very same track for many weeks together.

If the violence of any passion has been among the immediate causes of insanity, that passion is brought into action with great fury, at some period of the disease, and pride, anger,

ger, or love, becomes a distinguishing feature. Fear produces an immediate expression of the strongest kind, deprives the maniac of speech, and renders his countenance a hideous caricature.

The contrary state to false perception, is an intensity of idea, which constitutes melancholy. The maniac, as Mr. Locke has observed, reasons justly, though from false premises, being deceived in his first impressions: the melancholic, on the contrary, perceives, not wrongly, but too intensely regarding some objects, which induces him to grant them an exclusive attention, and leads him to reason improperly, even concerning his truest perceptions.

A melancholy patient, despairing of his circumstances without foundation, was persuaded with much difficulty to draw up a short statement of his affairs, which he did with great accuracy. He placed his debts in one column, and his property in another,

H 2

opposite.

opposite: But no arguments nor intreaties could prevail upon him to compare the columns, by which it would have appeared that he was master of a considerable sum: his attention was wholly occupied with the list of his debts, and he obstinately averted his eyes from the other column.

There is a case in which melancholics appear to have false perceptions, but I think it resolvable into intensity. This is when such patients accuse themselves of murder, or some other enormous crime, which they have not committed. This may happen in two ways: 1. Many cases of insanity consist of a mixture of mania and melancholy, in their commencement; in this state of the disease visions are common, which are referred to the prevalent ideas in the patient's mind, and are remembered as real occurrences, when pure melancholy has predominated. 2. Even in cases purely melancholic, the patient may mistake a dream for a real event.

Melancholics

Melancholics are always apt to impute their uneasy feelings, especially those arising from flatulence, to demoniacal action, and they will form the most extravagant suppositions, to account for the entrance of the demon into their bowels. Upon this subject it is vain to reason, and whoever attempts to ridicule the patient, loses his confidence entirely.

One of the most unhappy states of melancholy, is that in which the patient suspects an intention to poison him. With this impression, he obstinately refuses every kind of nourishment, and, unless managed by skilful attendants, dies of famine. I once saw a patient who had passed a fortnight without food, and who died of mere inanition: he resisted, to the last, every attempt to force a little wine into his mouth.

I have very generally found congestion in the brain, and effusion of water into the ventricles, on examining the heads of melan-

cholics after death: I have never been able to trace any connection between the symptoms of the disease, and the appearances on dissection, excepting in the cases I have mentioned elsewhere, of conversions to epilepsy, from maniacal disorders of long standing.

When a maniacal fit is going off, an appearance of stupidity and heaviness is rather a favourable symptom: the length of the lucid interval is generally proportioned to the degree of this appearance.

All degrees of insanity which affect the temper more than the understanding, are obstinate, as far as I have observed; and as these often happen in persons who seem otherwise perfectly healthy, there is a total want of indications in such cases. There is, however, an incurable sort of insanity, in which the patient, with great good-nature, is constantly on the watch for an opportunity of telling falsehoods. This is commonly a mixture of mania and melancholy. A lunatic

lunatic of this sort makes himself the hero of every subject that chances to be mentioned in his hearing :

“ Dives,

“ Liber, honoratus, pulcher, Rex denique regum.”

Maniacal disorders are commonly exasperated in women, about the period of menstruation; in recent cases, a mitigation of the paroxysm, or even a complete intermission may be expected to follow the period, but in chronic cases no effect is to be derived from this incident, expecting a slight exacerbation of the disease, from the agitation of the menstrual effort. When a lucid interval does happen, immediately after the period of menstruation, it seldom continues longer than a few days.

The most general causes of insanity which I have had occasion to notice, are hard drinking, accompanied with watching; pride; disappointment; the anguish arising from calumny; sudden terror; false opinions respecting religion; and anxiety in trade.

These operate chiefly on men.—From the peculiar situation of the other sex, their minds are sometimes deranged by the restraint or misdirection of passions, which were bestowed to constitute their happiness.

Many cases of conversion produce insanity; this disorder supervenes on the imprudent suppression of eruptions; on the extinction of continued fevers, or of pneumonic inflammation; on the extension of scrophula to the glandular parts of the brain; and on the irregularities of circulation produced in the puerperal state. Lieutaud mentions a woman, who was affected with mania, in consequence of a suppression of the menses, in her fiftieth year. She continued insane during seven years, and was restored to her senses by an uterine hæmorrhage.*

In recent cases of mania, there is commonly much disorder in the functions of the stomach; vomiting, therefore, is usually

* Hist. Anat. Med. Tom. 1. p. 320. obs. 1369.

employed, and it not only relieves the patient from a temporary cause of irritation, by clearing the first passages, but sometimes produces a favourable change in the mental disease.

M. P. a young woman, came under my care, Sept. 5th, 1792; she was in a state of furious agitation, and her ideas were totally confused. She could not be brought to attend to any object, and it was impossible to obtain an answer from her to any question. I ordered her a vomit of tartar emetic, in the usual manner, which operated briskly, and had an instantaneous effect in restoring a degree of rationality. On the 10th (five days after), the report was, "continues rational." She was discharged cured, soon afterwards. Such a degree of success must not often be expected from this remedy.

Emetics are sometimes useful, in diverting patients from capricious resolutions. An elderly gentleman, in a state of melancholy, determined

determined to retain his urine, and persevered, in his resolution during three days and two nights, though evidently with great pain and difficulty. I ordered some doses of emetic tartar to be mixed with his food, which he took with some caution; copious vomiting was excited, and at the same time he parted voluntarily with a large quantity of urine; the sudden stimulus given to the distended bladder, by the action of vomiting, proving too strong for his resolution. This caprice did not return upon him afterwards.

The repetition of vomits, and the use of antimonial preparations, in nauseating doses, are certainly proper in maniacal cases: the uneasy sensations which they excite, seem to recal the patient's attention to a regular train. But in melancholics, the addition of these depressing ideas would only encrease the disease, by furnishing an opportunity for some new fancies; melancholy madmen being, as I have already observed, great theorists. Though a single emetic
may

may do considerable service, therefore, in such cases, it ought not to be repeated without a manifest indication.*

In maniacs, who are young and plethoric, whose eyes are turgid or inflamed, who pass the night without sleep, and whose pulse is quick and full, general blood-letting ought to precede the use of emetics. A lady of a full habit, who was seized with maniacal symptoms after a slight fit of cholera, was restored to her senses by a single, copious bleeding. But the repetition of this remedy is nice and difficult, as it is seldom capable of removing the disease, without the conjunction of other methods, and as an extraordinary loss of blood may precipitate the patient into an irrecoverable state. I have seen maniacs bled till they became melancholy, and melancholics, by repeated venæsection, reduced to despair.

* Since the former sheet was printed, the girl, mentioned in p. 121, has again been put under my care, in a state of furious mania, and has again been cured by exhibiting emetic tartar, first in vomiting, afterwards in nauseating doses.

It is only in case of evident congestion, with an apoplectic tendency, that the repetition of bleeding can be reckoned admissible. I have, indeed, twice known maniacal paroxysms removed by a single bleeding, but they were both recent cases, and in one a relapse soon followed; in the other, there was a conversion to palsy, and afterwards to apoplexy. There is always reason to suppose congestion in mania, after fevers; but when congestion happens in habits much reduced by the previous disease, general evacuations must be very cautiously employed. Those facts which I have mentioned elsewhere, relating to the occurrence of spontaneous hæmorrhage in cases of typhus,* seem to admit a greater latitude in this respect, than has hitherto been permitted. Some practitioners prefer bleeding in the neck, in this disorder, but I have not been able to discover, that it is more effectual than bleeding in the arm.

* On the Conversion of Diseases, p. 29.

Purgatives are undoubtedly useful in most cases of insanity; but only when moderately given. I have used the celebrated melampodium in a great number of cases, so as to purge the patient gently, twice or thrice a week: I have found no reason to believe that it operates otherwise than as a cathartic. For a considerable time past, I have preferred calomel, both as a safe and easy purgative, and as considerable hopes have been excited, of benefit to be derived from its proper action as a mercurial preparation. I shall give here the result of my observations respecting this remedy, in which, I confess, I have been much disappointed. Farther experience, and a nicer discrimination of the scrophulous causes of insanity, against which nothing can be hoped from mercury, must fix our opinion decisively respecting this method of treatment.

1. J. J. a young man, of a full habit and florid complexion, after receiving some gloomy religious impressions, fell into a fretful,

ful, discontented state, and in the course of a few weeks became maniacal, with a mixture of melancholy. When I saw him, his eyes were inflamed and looked wildly; he was restless, querulous, and irascible. Bleeding, vomiting with emetic tartar, and purgatives were used without effect. He was then put upon a course of calomel, which was continued till his mouth became very sore, without any abatement of the maniacal affection.

2. Mrs. T. a married woman, of middle age, became melancholy without any sensible cause. She talked incoherently, was fretful, and frequently wept. Not long before I saw her, she had made an attempt upon her life. She took calomel, with opium, from the 21st of June to the 5th of July, when, her mouth being very sore, the mercury was discontinued, and the opium was given alone. The bark was afterwards thrown in: under this course, she became rather more composed, but no benefit was obtained, proportioned to the activity of the remedies.

3. An

3. An elderly gentleman, who has been for several years in a state of amentia, has twice been affected with a considerable herpetic eruption on the neck and shoulders, for which calomel was administered in the form of Plummer's pill. His mouth was made very sore, each time, and the eruptions were removed, but no effect was produced on the state of his mind.

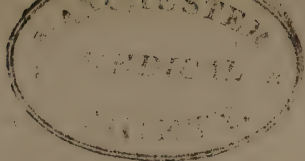
4. Mrs. J. a married woman, about the age of forty, was affected with a mixture of mania and melancholy. About the commencement of the mental disorder, her skin became diseased, and was covered, when I saw her, with a furfuraceous eruption. To remove this cutaneous affection, appeared a rational indication. She was put upon a course of Plummer's pill, and her mouth was made sore, but no relief was obtained.

5. Mr. T. P. a maniac, not furious, but full of troublesome, false perceptions, among other remedies, was ordered a course of calomel

calomel with opium. His mouth was affected after some time, when finding no benefit from the medicine, I omitted it.

This remedy was tried in several other cases, of which my notes are incomplete, with equal ill success. It is proper, however, that I should mention two instances, where, if the calomel alone did not cure, it must be allowed to have assisted in restoring health.

6. J. B. about twenty-six years of age, had been for some time in a state of furious mania, when I saw him. He took vomiting doses of tartar emetic, and afterwards, two grains of solid opium at bed-time, which was gradually encreased to seven grains, twice a-day, without any sensible advantage. The opium was given, nearly during *two months* and he took fourteen grains a-day, upwards of a week. Finding it of no use, after so full a trial, I omitted it, and ordered him to go thrice a week into the warm bath, to remain there a full half hour each time, and
to



to take three grains of calomel every night, at bed-time. During this course, his fury abated, and he became brutal and stupid. His mouth was pretty severely affected, during several weeks. The mercury was continued or omitted, according to the state of his gums, and at the end of five months he was completely cured.

In this patient, there was great obduracy of natural temper, and insensibility to remedies. It was therefore necessary to institute a tedious mercurial course, in order to produce the desired effect. I believe the long immersion in the warm bath must be allowed to have operated, both by calming his fury, and by disposing the system to favour the mercurial action.

7. A lady of a domestic, industrious disposition, fell by degrees into a maniacal state, which discovered itself chiefly by an uncommon levity in her conversation and behaviour. She could recollect, but never totally
VOL. II. I restrain

restrain herself; was noisy, familiar, and constantly disposed to run and jump about. Her perceptions were quick, and I could not discover that they were, in any instance, false: so far the case was very singular. She had a considerable tumor, on account of which there was a necessity for her submitting to a painful operation, of some length, soon after she came under my care. She consented to the proposal, bore the operation with great firmness, and recovered from it without a single bad symptom: in every thing relating to it, she perfectly understood her own situation. But when the wound was healed, her mental disorder did not appear to be abated. As she was now in full health, I put her on a mercurial course, but I found that small doses of mercury operated with her as strong cathartics. Her habit was so full, that I saw no inconvenience from throwing in the medicine, so as to support a loose state of the bowels; it was therefore continued for nearly three weeks. The usual dose of calomel, during the latter part

of

of that time, was only half a grain, and her mouth, as may be supposed, never became sore. After the calomel was given up, a spontaneous diarrhæa came on, which seemed to relieve the mental affection. She took two grains of opium every night, but I was not anxious to check the discharge, as her mind became more composed during its continuance. The diarrhæa gradually ceased, and she remained free from every maniacal symptom after its disappearance. The spontaneous diarrhæa, I conceive to have been an effort of the constitution, in one word, a conversion, by means of which the affection of the brain was extinguished. It is probable, that the purging excited by the mercurial course, might in some measure determine the nature of the effort, and turn that force to the internal surface of the intestines, which might otherwise have been exerted on the hæmorrhoidal, or uterine vessels. So far this case seems to encourage the practice of brisk purging in maniacs. But few instances occur, in which the patient's

12 robust,

robust, and even luxuriant health, and undisturbed natural functions, will equally justify the carrying this method to any great extent.

Upon the whole, I think calomel deserves to be farther tried in cases of insanity. From the benefit which I have seen accompany the use of cream of tartar, as a laxative and diuretic, in congestion of the brain, I have been led to order it in melancholic cases, where the disease seemed to depend on a course of this nature.

An elderly lady, whose constitution had an invincible tendency to plethora, was attacked by symptoms of melancholia. I ordered her cream of tartar, in such doses as to affect both the bowels and kidneys, and with the happiest effects. Her pulse, from being full and quick, became natural, and she recovered in the space of a month.

It gives me real concern to state, that I
have

have scarcely any observation of importance to make, in addition to these pages, after much additional experience. The plan of constant, gentle purging answers very well, in cases of melancholy, when the habit is full, not otherwise. From the tepid bath, in melancholic cases, I continue to derive much advantage; and the use of the hot bath in mania, continued to the period of half an hour, or an hour, sometimes affords great relief: but in this I have met with disappointments, mixed with some striking instances of success,

From some cases, I had been induced to entertain great expectations from the combination of camphor and digitalis. In one instance, where it had been ordered before I was called in, by Mr. Tomlinson of this place, the effects were very striking, in lowering the pulse, and removing the mental irritation. I have found the combination useful in other cases, but not uniformly. It has proved very serviceable, however,

in pneumonia, and in irritable coughs, accompanied with general fever. In some recent instances of mania, I have used emetic tartar in nauseating and vomiting doses, and have immediately followed up the exhibition of that remedy with small doses of calomel, till the gums have become affected: I have then given the bark. As far as I have tried this method, it seems to answer very well, in mixed cases of mania and melancholy, or in mania arising in weak habits, where there are no symptoms of congestion, or of oppression of the brain.

The liberal use of bark and wine is clearly indicated in many cases of melancholy. A weak pulse, want of appetite, flatulence, emaciation, and expressions of grief and fear, similar to the low delirium in typhus, are often united in this complaint.

A. G. a married woman, aged about thirty-six, fell into a deep melancholy, attended with the symptoms I have just described:

described; after evacuating her bowels, she was ordered the bark in substance, which removed all her complaints in less than a fortnight.

J. H. a young man, was reduced by the same series of complaints to a state of great weakness, and at length to complete amen-tia. He had some doses of calomel, but not in sufficient quantity to affect his mouth. He was then put on the use of bark in substance, and of the cold bath. Under this treatment he recovered his strength and flesh, became more chearful, and was enabled to answer some questions. He has not yet recovered the complete use of his faculties.

E. B. an elderly woman, was attacked by a fit of deep melancholy, to which she had been formerly subject. Bark in substance, and the cold bath, were directed for her, with an opiate at bed-time. She was cured in six weeks, but relapsed about the same time in the succeeding year.

For the other general remedies of insanity, I must refer to what I have published in the first part of the *Medical Histories and Reflections*.

The management of the mind is an object of great consequence, in the treatment of insane persons, and has been much misunderstood. It was formerly supposed that lunatics could only be worked upon by terror; shackles and whips, therefore, became part of the medical apparatus. I have absolutely seen, among the rules of a lunatic hospital, one which declared, “that the keeper might beat the patients, provided it were done with discretion, and by order of the physician!” I will go no farther into this shocking subject; it is now unnecessary to withdraw the veil, which covers the tortures, the murders, which at a former time were inflicted on this wretched class of patients, in places provided for their reception. A system of mildness and conciliation is now generally adopted,

adopted, which, if it does not always facilitate the cure, at least tends to soften the destiny of the sufferer.

I have seen great exertions thrown away, in attempting to influence lunatics by arguments, or to surprise them into rationality by stratagem. I never knew such endeavours answer any good purpose. The stories current in books, of wonderful cures thus produced, are, like most other good stories, incapable of serving more than once.

A system of discipline, mild, but exact, which makes the patient sensible of restraint without exciting pain or terror, is best suited to those complaints. In the furious state, the arms, and sometimes the legs must be confined, but this should never be done when it can possibly be avoided. When the patient is mischievous and unruly, instead of ordering stripes, I shut him up in his cell, order the window to be darkened, and allow him no food but water-gruel and dry

dry bread, till he shews tokens of repentance, which are never long delayed, upon this plan. Previous to this kind of punishment, I find it useful to remonstrate, for lunatics have frequently a high sense of honour, and are sooner brought to reflection by the appearance of indignity, than by actual violence, against which they usually harden themselves.

It is owing to the sense of restraint, that lunatics recover more quickly when they are removed from home. While they remain with their friends, the disease seems to acquire additional strength, from the concern and exclusive attention of which they are the objects; among strangers, they find it necessary to exert their faculties, and the first tendency to regular thinking becomes the beginning of recovery. It must be acknowledged, that the desire of returning home sometimes grows ungovernable in melancholics, and it becomes necessary to indulge them with a short interview with
some

some object of particular attachment. At such times, it is dangerous to relax too much, and to favour the error, under the influence of which, their partial relations mistake the earnest desire of returning, for the revival of reason. Much self-restraint, much eloquence, and artifice, are often shewn by the patient on these occasions, which, according to the management of the attendants, prove either salutary or mischievous.

Though I would exclude every thing painful and terrible, from a lunatic-house, yet the management of hope and apprehension in the patient, forms the most useful part of discipline. Small favours, the shew of confidence, and apparent distinction, accelerate recovery; while seclusion and solitude, diminution of light, and privation of the customary food, mitigate the furious and malicious patients.

It has long been my wish, that a room might be appropriated in our hospital, to convalescents,

convalescents, and that the privilege of admission to it might be made the reward of regular behaviour among the patients. Such a distinction would act powerfully in creating a habit of self-restraint, the first salutary operation in the mind of a lunatic. For in the cure of diseases of this nature, the patient must 'minister to himself;' medicine may restore him more early and more completely to the command of his intellectual operations; discipline must direct him in their exertion.*

* I have known recovery take place, rather unexpectedly, where I could attribute it to nothing but the train of reflections, produced by the visits of the physician. The case to which I allude, was a mixture of melancholy and mania, but melancholy predominated greatly, and the frequent appearance of the practitioner excited much enquiry and speculation in the patient, which had a happier tendency than usual.

REMEDIES OF DROPSY.

REMEDIES OF DROPSY,

Continued from Vol. I.

IN pursuance of the plan for establishing some general rules for the cure of Dropsy, I now lay before the public a short view of my hospital practice in that complaint, mixed with some private cases, since the publication of the former volume. From a sufficient number of facts thus collected, we might learn, what remedies deserve a preference on the first trial; how long the exhibition of any single medicine may be continued, when signs of recovery do not appear from its use; and in what manner hydragogues may be intermixed, with the greatest prospect of success. These are rules which books do not teach us at present: Dr. CULLEN has even declined the task of specifying

specifying diuretics, in his *First Lines*, because he could find no reasons for choosing among them in practical authors. The want of discrimination in this matter, is a defect which every young practitioner must feel strongly, and which can be but slowly supplied; for the majority of dropsical disorders are inevitably fatal, and the palliative practice which incurable cases require, is not very instructive.

CREAM OF TARTAR.

HISTORY I.

Joseph Bradshaw, aged forty-seven, admitted March 5, 1792, had a troublesome dry cough, pain in both arms, shooting down to his fingers, and orthopnoea. He had been ill three years, and unable, during a long period, to lie down in bed. His urine was scanty. He began the use of cream of tartar on the 6th, and on the 8th his urine was encreased, and he was much easier. He could now lie down in bed. On the 22d all his symptoms were gone, and the cream of tartar was omitted on the 29th.

29th. His symptoms returned on the 26th of April, but were again removed by the cream of tartar, and he was discharged cured, May 15th.

HISTORY II.

Magdalen Cross, aged seventy-four, admitted March 5, 1792, had been ill for three months, of considerable anasarca in the lower extremities. She took cream of tartar as usual, which purged her severely. On the 8th her swellings were nearly gone, and she was dismissed cured on the 4th of April.

HISTORY III.

John Beswick, aged fifty-eight, admitted March 19, had anasarcaous swellings of the lower extremities, of a week's continuance. He took cream of tartar: on the 22d his urine was encreased, and the swellings were less. He was discharged cured in a few weeks.

HISTORY IV.

Joseph Wilcock, aged thirty-seven, admitted April 30, had been suddenly attacked

VOL. II. K with

with anasarca ten days before : his scrotum was much distended. His urine was scanty. He took cream of tartar ; on the 8th his urine was encreased, but the swellings were not diminished ; on the 14th the swellings were less, and he passed a great deal of urine : on the 18th he was completely well.

HISTORY V.

John Clough, aged fifty, came under my care, August 30th, with anasarca of both legs. There was an ulcer on the left, but no water drained off by it. He had begun the use of cream of tartar before I saw him, with little effect. I encreased the quantity to six drachms. On the 31st the swellings were less. On the 10th of Sept. they had entirely disappeared. I believe he has since relapsed.

HISTORY VI.

John Birch, aged twenty-five, admitted Sept. 27, 1792, was seized with ascites and anasarca, after the confluent small-pox. He was prodigiously distended, and the cellular membrane

membrane of the penis and scrotum was completely filled. He took cream of tartar; Nov. 3d, he was purged, passed more urine, and the swellings were less. On the 10th the swellings were much diminished; on the 16th they were almost gone, and he was discharged soon after.

HISTORY VII.

Mary Newton, aged thirty-five, admitted Nov. 1792, had a dry cough, orthopnoea, and had been unable to lie down in bed for some months. She had considerable anasarca in the lower extremities, and some degree of it in both arms, but more in the left arm. She also complained of dull pain, and sometimes a tingling sensation, in the left arm. She began to take cream of tartar immediately, and as the cough was very distressing at night, she had small doses of opium and camphor at bed-time. Nov. 9th, she was much easier; her urine was encreased, and she was little purged. She continued easier, but the swellings did not abate till the 23d,

when the feet seemed diminished, but the legs were much distended. On the 15th Dec. she was much better, and could lie down in bed. She was now taking six drachms a-day of cream of tartar. On the 20th the swellings were entirely gone, and her respiration was perfectly free; but she complained of rheumatic pains, which were removed in a few days, by the use of the *pulvis sudorificus*.

HISTORY VIII.

A man, aged sixty, applied to me, March 3d, 1792, ill of ascites and anasarca. He had likewise a great degree of orthopnoea, and a distressing cough. His disorder had continued for a year and half, and the swellings had been preceded by a dry cough, orthopnoea, and tingling in his left arm and hand. I ordered him cream of tartar. On the 8th his swellings were less, and his urine was encreased; from the 10th to the 18th the swellings fell, and he passed much urine. On the 24th the swellings were stationary; two
grains

grains of gamboge were therefore added to the cream of tartar. On the 25th he was better : by encreasing the dose of cream of tartar to six drachms, and then to an ounce, and by occasionally adding gamboge, he was nearly well on the 4th of April ; and on the 11th thought himself well enough to discontinue his medicines.

On the 16th of May, however, he returned, as much swelled as ever, and extremely costive ; he scarcely passed any water. I ordered him a bolus, composed of squills, calomel, and gamboge, which operated briskly, and reduced the swellings. On the 30th the swellings were stationary. He was now purged with an electuary, composed of cream of tartar, gamboge, and jallap, but as the disorder did not give way to this method, I had recourse, on the 20th of June, to mercurial friction, and the regular use of spiritus ætheris nitrosi. At this time, the integuments of the scrotum and penis were greatly distended. His urine

soon encreased in quantity, and about the beginning of July his swellings began to diminish. In the middle of July, the swellings were entirely gone: he was then put on a course of tonic remedies. In the beginning of August, he could lie down easily in bed. He occasionally took doses of cream of tartar, and always with relief, when he was threatened with a return of his complaint.

Towards the beginning of December, he relapsed, and after trying various remedies with little relief, was ordered digitalis; the affection of the breast having become very distressing. By degrees he took the quantity of four grains a-day, and was sensible of some relief; on the 25th his swellings were much decreased, and in the beginning of January were entirely removed. His breathing became natural, his cough left him, and he could lie down in bed. No complaint remained, but weakness. Feb. 27th, he called on me, free from swellings and orthopnoea.

HISTORY IX.

Elizabeth Wells, aged fifty-eight, much debilitated with anasarca and ascites of long standing, began to take cream of tartar on the 8th of Dec. 1791. she obtained no relief, and died on the 28th of the same month.

HISTORY X.

Mary Williams, aged two, was admitted 8th May, with anasarca and ascites, of two months duration. She was ordered a drachm of cream of tartar, in two ounces of mint-water, every night. On the 24th, her swellings were much lessened, and at the end of the month she was discharged cured.

HISTORY XI.

Ann Lees, aged thirty, admitted June 18th, had been ill of ascites for a month. She was put on a course of cream of tartar, but being much debilitated, took a dose only once in two days, and used tonics occasionally. On the 19th of July, it was

necessary to encrease the dose of cream of tartar to six drachms. In the beginning of August her swellings were gone, and she was seized with hæmoptœe, for which she was ordered digitalis, in encreasing doses, and the cream of tartar was omitted. On the 23d of August, she was nearly as much swelled as ever. The cream of tartar was then repeated, and she was discharged cured on the 8th of October.

HISTORY XII.

John Roberts, aged fifty, admitted July 2, had ascites and anasarca of a fortnight's duration. He was ordered cream of tartar, and six ounces of the cerevisia diuretica were directed to be given warm, every night at bed-time. He was discharged cured on the 20th of August.

HISTORY XIII.

John Campain, aged twenty-five, admitted July 23d, had been ill of anasarca for a fortnight. He took cream of tartar: my report of him on the 30th is, "much better; swellings down."

down." He discontinued his attendance in August, probably having recovered.

HISTORY XIV.

John Taylor, aged thirty, admitted January 2, had been seized with ascites and anasarca some weeks before, in consequence of exposure to cold. I ordered him to take half a drachm of Dover's powder at bed-time, which sweated him plentifully, and diminished the swellings in some degree. But as his urine did not encrease, and the swellings continued, he was afterwards ordered cream of tartar. On the 7th, his size was reduced, and his urine encreased. On the 9th, his swellings were almost gone, and the cream of tartar was omitted. A troublesome cough remained, which gave way to the common remedies.

HISTORY XV.

Mary Leech, aged forty-eight, admitted July 1st, 1792, after a tedious dyspeptic complaint, and severe pain in the stomach, was seized with ascites and anasarca. She had

had a cachectic appearance, and symptoms of obstruction in the liver. She was ordered to use friction with mercurial ointment, and to take the spiritus ætheris vitriolici. On the 17th she was costive, and the swellings were nearly in the same state. She was ordered to take five grains of gamboge, in a draught, with a drachm of spiritus ætheris nitrosi. This she threw up, and her complaints continued, but her urine was rather encreased. The cathartic draught was repeated. Aug. 7th, the swellings were encreased. She was then ordered two grains of gamboge, with half an ounce of cream of tartar, every morning. On the 20th, her swellings were gone, but she was extremely weak. She was put on a course of tonic remedies, but languished, without any appearance of recovery: the swellings did not return, but she died, quite extenuated, on the 15th of September.

HISTORY XVI.

Frances Clough, aged seventy-four, admitted March 8th, 1792, had been ill for six weeks,

weeks, of anasarca, ascites, and hydrothorax. The swelling on the back of each hand was high and puffy. She began to take cream of tartar on the 8th. Next day she was easier. On the 18th her complaints were stationary: on the 24th, no better. She was now ordered a cathartic draught, with five grains of gamboge, and two drachms of spiritus ætheris nitrosi, which purged, but did not relieve her. On the 26th she continued very ill, and the backs of her hands were greatly swelled. She died on the 28th.

HISTORY XVII.

Mary Thompson, aged thirty, was admitted Feb. 27, 1792, ill of ascites. She was ordered cream of tartar, which lessened her swelling, but as the purgative effect was severe, it was only given occasionally, and tonics were interposed. On the 19th of March, the spiritus ætheris vitriolici was substituted for cream of tartar, and she was dismissed cured in the beginning of April.

HISTORY

HISTORY XVIII.

Mary Smith, aged forty-two, admitted July 30th, 1792, had ascites; at the same time, there was a soft, inelastic tumor on the left side, which appeared to proceed from distention of the ovarium. She was ordered mercurial frictions, with *sp. ætheris vitriolici*. Aug. 9, there was no change. She was then ordered a draught, with gamboge and *sp. ætheris nitrosi*. On the 13th, she was costive; the local tumor was diminished, but the general fulness of the abdomen was the same. She was then put on a course of cream of tartar, and the former method was discontinued. On the 23d, the cream of tartar was encreased to six drachms, and the friction repeated. On the 6th of September, her swellings were much abated, but she was costive. She was ordered an ounce of cream of tartar every morning, and the friction was omitted. Nov. 8th, she was again costive, and the cream of tartar was encreased to ten drachms. On the 28th of December, she was nearly well. She was soon after discharged cured.

HISTORY

HISTORY XIX.

Peter Morgan, aged forty-two, admitted Dec. 1, 1794, with ascites and anasarca, took cream of tartar during a fortnight, with much relief; his swellings were abating, when he unexpectedly quitted the hospital, and disappointed me in my hopes of seeing a favourable event of the case.

HISTORY XX.

John Mardley, aged sixty, was admitted July 30th, 1792; he had been ill of ascites and anasarca for a fortnight. He was ordered cream of tartar in the usual form. On the 2d of August, the dose was encreased to six drachms. On the 20th, the swellings were not diminished. Sept. 3d, however, the swellings were less. On the 13th, the cream of tartar was encreased to an ounce. On the 17th, the abdomen was diminished, but the anasarca was encreased, and extending upwards. He was much oppressed, and evidently worse on the whole. The cream
of

of tartar was therefore omitted, and he was ordered to take half a drachm of the *virga aurea* in powder, twice a-day, with half a pint of the *cerevisia diuretica*. On the 20th, his swellings were the same, but he passed more urine: the *virga aurea* was repeated thrice a-day. On the 27th, his urine was still encreasing. On the 15th of Oct. the *virga aurea* was repeated four times a-day. On the 18th, he had no purging, passed more urine, and was less swelled. On the 22d, he was in the same state, but the *virga aurea* was consumed: six drachms of cream of tartar were therefore ordered every morning. Nov. 8th, the swellings lessened considerably; and continued to fall on the 12th. Dec. 10th, the cream of tartar was encreased to an ounce. On the 17th, the swellings were greatly diminished. Towards the middle of January, they were almost gone, but he complained of dimness of sight, and violent head-achs. He sometimes observed, however, that the cream of tartar did not lessen his size so quickly as the green powder

der had done. In February, he was made an out-patient, and his attendance became irregular; but he was discharged cured about the middle of April.

HISTORY XXI.

Sarah Hughes, aged fifty, was ill of ascites, with some swelling in the lower extremities. She had been affected with dropsy formerly, and had been tappèd not long before she came under my care, but was now encreasing again in size. I put her on a course of cream of tartar, the dose of which was occasionally encreased, and in the course of two months her swellings were almost entirely removed.

HISTORY XXII.

George Musgrave, was ill of anasarca, with some degree of ascites. I ordered him cream of tartar, in the usual manner, which reduced his swellings in the course of a few weeks. By returning too early to his work, he brought on a relapse, and an obstinate ascites was formed, which resisted cream of tartar,

tartar, nicotiana, and every other means of relief. Mercury was employed, as a last resource, but without effect, for he died, completely exhausted.

HISTORY XXIII.

A gentleman, somewhat advanced in life, of a very delicate habit, and long a valetudinarian, consulted me in Dec. 1793, for a considerable degree of anasarca, and an incipient ascites. I directed the cream of tartar to be given, but in doses of two drachms only. It did not sensibly encrease his evacuations, either by stool or urine, but he soon began to walk up stairs with less difficulty, and in the course of a fortnight, his swellings were entirely removed. He has continued well ever since.

HISTORY XXIV.

William Bradley, aged eight years, was admitted Aug. 19th 1794, ill of a typhus. In a few days after I saw him, ulcerations of the inside of the mouth and cheeks came on. When these symptoms were decreasing, by
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the use of tonics, he was affected with ascites and anasarca, and was soon greatly distended. I ordered him digitalis, but it proved ineffectual. I then put him on a course of cream of tartar, supporting him at the same time with wine. Under this method, the dropsical symptoms gave way rapidly, and he was discharged cured, Sept. 25th.

HISTORY XXV.

George Adams, aged one year and three-quarters, had been ill of ascites for twelve months. He was ordered three ounces of the hydragogue solution every morning, which was encreased to five, and as the swellings abated, to eight ounces, in the course of six weeks. But the prospect of recovery was destroyed, by the accession of a smart teething-fever, in the progress of which his swellings returned, and he was carried off.

HISTORY XXVI.

Ruth Ratcliffe, aged twenty-five, was admitted, April 7th, 1793. She had been ill of

ascites and anasarca upwards of two months. She was ordered the hydragogue solution, which encreased her urine, and diminished the swellings, and she was discharged cured on the 18th of August.

HISTORY XXVII.

John Wood, a middle aged man, had been affected with ascites and anasarca for several weeks. He had an incessant, teasing cough, orthopnoea, and could not lie down in bed. He took the hydragogue solution, in the usual manner, and in six weeks was discharged cured.

HISTORY XXVIII.

William Winterburn, an elderly man, was admitted Nov. 21st, 1794, ill of anasarca, incipient ascites, and very troublesome cough. He was ordered the hydragogue solution. In a few days, it was necessary to encrease the quantity of cream of tartar to six drachms a-day. On the 25th, his swellings began to decrease; he passed more urine

urine and had two stools or more every day. On the 28th, his swellings were much lower, but his cough was still harrassing. Dec. 12th, the swellings were nearly gone. On the 15th, his legs swelled again: the cream of tartar was encreased to an ounce. A few days afterwards, it was augmented to ten drachms; then to an ounce and half. In the beginning of April he was free from his dropsical symptoms.

HISTORY XXIX.

Mary Byrom, aged forty-three, admitted Oct. 14th, 1793, had been ill of ascites for six weeks. She was ordered the hydragogue solution. On the 17th, she passed more urine, and her swelling had decreased two inches. A few days after, the cream of tartar was encreased to six drachms. The swelling was still lessening. But on the 4th of Nov. she again encreased in size, and her urine became scanty. The cream of tartar was continued, without effect, till the 21st, when it was exchanged for the tonic pills. They encreased her urine at first, though

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she did not take them regularly. On the 20th January her swellings were nearly gone. She was then put on a course of tonics, and was discharged cured in the beginning of April.

HISTORY XXX.

Mary Bury, aged nine, a girl of a cachectic appearance, had an ascites of several months standing. The abdomen was enormously distended, and was encreasing rapidly in size, when I saw her, March 20, 1794: she was put upon the use of the hydragogue solution. She took only two drachms of cream of tartar at first, but it was soon encreased to half an ounce, and afterwards to six drachms. On the 9th of April, the swelling had decreased an inch. She then began to complain of violent pain in the lower part of the abdomen, which returned every night. On the 11th, the swelling encreased again: gamboge with spirit of nitre was interposed without effect. On the 22d, she was seized with vomiting and purging of blood, and expired. I could not obtain leave to inspect the body.

HISTORY

HISTORY XXXI.

Martha Yates, aged twenty-three, was seized with ascites and anasarca, after delivery: the dropsy had continued five weeks when I saw her. She had used various remedies, and among others two doses of *elaterium*, after the last of which her swelling encreased. March 30th, she was ordered the hydragogue solution, which purged her severely, and somewhat encreased her urine. The dose of cream of tartar was therefore lessened to two drachms. On the 4th of April, the swelling of the abdomen had decreased two inches and a half. She had many stools, and passed more urine. On the 11th she had fallen half an inch more; but this was the period of our good success. The swellings, after that time, encreased again, and her cough became more distressing. She was then ordered digitalis with opium, calomel with squills, and jallap, without relief. After this, I directed her to use mercurial frictions, and the spiritus ætheris vitriolici, till her mouth became

slightly sore. The distention encreasing, and great pain in the left side coming on, it was necessary to tap her. A considerable quantity of water was drawn off, after which I again endeavoured to affect her mouth by mercurial frictions. She began, however, to fill again, and the pain in her side returned. A variety of diuretics was employed; but the abdomen growing again extremely distended, another operation became necessary. After the second tapping, she continued to feel violent pain, and her strength sunk rapidly. She died in July, and I was not permitted to open the body.

HISTORY XXXII.

Robert Berry, had been ill of ascites and anasarca for four years. He was put on a course of cream of tartar, in the usual manner, Feb. 16th, 1795. On the 9th of March, it was encreased to six drachms; his swellings were then abating. On the 19th it was augmented to an ounce. April 6th, he was nearly well.

HISTORY

HISTORY XXXIII.

Ellen Green, aged eighteen, had ascites, and incipient anasarca, of a month's standing. She began a course of cream of tartar, March 2, 1795; it was augmented to six drachms, afterwards to an ounce a-day. April 6th, her swellings were removed.

DIGITALIS.

HISTORY XXXIV.

Sarah Duxbury, aged eighteen, had been ill of anasarca for some time before she came under my care, Dec. 19, 1791. She was ordered a grain of digitalis daily. Her urine was soon encreased, and she was cured in the beginning of February. This was a slight case.

HISTORY XXXV.

Ann Brown, aged sixty-nine, was admitted April 11th, 1792, with ascites and anasarca

of a month's standing. She had a severe diarrhoea, which prevented me from using cream of tartar. I ordered her a grain of digitalis in a draught, with a dose of spiritus ætheris vitriolici, and twenty drops of laudanum. Next day the digitalis was continued. Her urine was encreased: On the 13th the urine was passed in a quantity three times larger than before, and the diarrhoea was stopt. But an unfavourable change soon took place. On the 19th her diarrhoea returned, and the swellings were stationary; on the 21st they encreased, and she continued to swell more till the 29th. Early on the 2d of May, she died, and was inspected in the afternoon. When the body was opened, we found a good deal of water effused in the abdomen. The liver was not more than half the natural size, scirrhus, and full of tubercles. The pancreas was much indurated and diseased: the spleen was enlarged. The caput cæcum coli appeared diseased, and full of tubercles. The jejunum was inflamed, for an extent of
several

several inches. There were adhesions between the rectum, and the posterior part of the uterus. The ovaria were small and hard.

In the thorax, there was an effusion of water on the right side, and there were adhesions, and a slight effusion on the left. There was some water in the pericardium. The heart and lungs were sound.

HISTORY XXXVI.

Peter Lomax, aged twenty-one, pale and much emaciated, came under my care for ascites, and vomiting of blood, Feb. 10, 1794. He had been ill upwards of a year. He took digitalis in encreasing doses, till he reached the quantity of a grain four times a-day. April 7th, his swelling was decreased, and the hæmorrhage was entirely suppressed. After this time, his complaint became stationary, and he complained of violent palpitations of the heart. On examining his breast, there was an evident extension of the pulsation of the heart,
across

across the thorax. It was so distinctly marked, in this extenuated subject, as to impress a forcible belief that the right auricle was considerably dilated. In September, the swelling of the abdomen was reduced by a spontaneous diarrhoea, but the hæmorrhage frequently returned, and he had bloody stools. Digitalis, opium, and wine afforded no relief. He died soon after, and I was refused permission to inspect the body.

HISTORY XXXVII.

John Jones, admitted Oct. 1792, of a cachectic appearance, pale, and extenuated, had anasarca and ascites in a considerable degree. He took digitalis without relief, but it was difficult to ascertain the effect of his medicines, as he laboured under a constant, slight delirium. He died in a few weeks. When the body was opened, we found water effused in the thorax and abdomen, but no other particular appearance, the viscera being perfectly sound.

BACHER'S

BACHER'S TONIC PILLS.

HISTORY XXXVIII.

William Exell, admitted Nov. 17, 1793, after a tedious fever, was attacked by ascites and anasarca. As there was reason to suspect obstruction of the liver, I put him on a course of calomel, but could not remove the swellings by it, though his mouth was affected. I then ordered him the tonic pills, which effected his cure, after he had persevered in their use for a considerable time. This was a very obstinate case.

HISTORY XXXIX.

Henry Robinson, aged sixty-three, was admitted April 7th, 1792. He had ascites and anasarca, with a harassing cough. The backs of his hands were greatly distended with water. I ordered him five grains of gamboge in a drachm of spiritus ætheris nitrosi. Next day he had three stools, and the swelling of the abdomen had decreased.

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He was then put on the use of cream of tartar. On the 10th he was no better; the gamboge draught was repeated. On the 11th, he had nine stools, and the abdomen had decreased five inches over night. This morning it had swelled again. April 12th, he had several stools, and the abdomen decreased three inches. I thought this a favourable time to order digitalis, and he began to take it this day: 13th, he had decreased another inch; the dose of digitalis was augmented to two grains a-day. April 19th, no progress had been made: the tonic pills were now directed; he took nine a-day. 21st, abdomen decreased two inches; respiration easier, six stools since the preceding day. The pills were continued. 25th, the size of the abdomen was much lessened, but the anasarca was encreasing; it rose upon the chest, and swelled him to the points of his fingers. 28th, the abdomen is completely reduced to a natural size, but the anasarca extends upwards. I ordered a small blister to be applied to the middle of the breast. May 1st, the draining of the
blister

blister continued. 5th, had six watery stools, passed more urine, and the anasarca diminished in fullness. 7th and 8th, the anasarca was encreased again: another blister was applied. May 9th, he was seized with a vomiting of blood, and expired.

HISTORY XL.

Mary Adshead, aged thirty-one, admitted Sept. 16, 1794, ill of ascites, took cream of tartar without relief. She was then ordered the tonic pills, and persevered in using them for some time, but deriving no advantage from them, she discontinued her attendance.

MERCURY.

HISTORY XLI.

Ann Hassel, aged seven, was admitted Feb. 27, 1792, ill of ascites. She was ordered to rub in a drachm of the unguentum cæruleum fortius, twice a week, and to take about twenty drops of the spiritus ætheris vitriolici four times a-day. On the 8th of
March,

March, her swelling was diminishing, and she passed more urine; on the 19th, the swelling was gone, and she was discharged cured.

HISTORY XLII.

J. Kearsley, aged sixty-four, was admitted about the end of April, 1792, with ascites. He was a thin, infirm old man. I directed the mercurial friction, and spiritus ætheris vitriolici. April 30th, the swelling was less, and his urine encreased, June 1st, the flow of urine was so constant, that he complained of it. The friction was interrupted. His legs now swelled, but the abdomen was nearly of its natural size. June 12th, every appearance of dropsy was removed, but he remained feeble. He was ordered tonic medicines, and was soon after dismissed cured.

HISTORY XLIII.

Mary Tattersall, aged twenty-three, was attacked by ascites, after being severely bruised in the abdomen, and both sides. She was

was prodigiously distended, and complained of violent pain in her left side, but her countenance was natural, and her strength pretty entire. Some of the common diuretics were given, without effect, and it became necessary to employ the operation, by which eighteen quarts of water were drawn off. When the swelling was thus reduced, the state of the viscera seemed to be alarming: there was great fulness and hardness in the region of the liver on the right, and of the spleen on the left side. I therefore judged it necessary to direct the mercurial friction, which was continued till her mouth was made very sore, when various diuretics were given, without encreasing her urine. She became again so much distended, that we had recourse to another puncture; seventeen quarts of water were now drawn off. On the diminution of the swelling, the liver felt smaller and softer. At a third tapping, seventeen quarts were again evacuated; at a fourth, ten quarts. Finding no relief from any method employed, she then left the house, and went to a distant part of the country.

HISTORY XLIV.

Valentine Ramsden, aged forty-seven, admitted June 20th, 1794, had ascites and anasarca to a very considerable degree. He was emaciated and weak, with a yellow suffusion over the whole skin; a considerable time before he became dropsical, he had sustained a severe injury on the right side, in the region of the liver, since which he had frequent pains in that place, sometimes shooting up to the right shoulder. He had a harassing cough, and copious spitting. After some ineffectual trials of cream of tartar and digitalis, I made him use the mercurial friction, and *spiritus ætheris vitriolici*. About the beginning of the course, the skin of one leg gave way, and discharged a great quantity of water. The friction was continued, till his mouth became very sore, with the effect of diminishing the swellings.* When it was necessary to omit

* At two different times, he threw up large quantities of water, which had a temporary effect in lessening his size.

the mercury, I put him on a course of digitalis, supporting his strength with wine, and occasionally opening his bowels with gamboge and calomel. He continued in a languishing state, and upon the healing of his mouth, the swellings appeared at a stand, and even seemed to encrease. I then omitted the digitalis, and ordered him a preparation of the bark, with tincture of cantharides, in the proportion of a drachm to eight ounces: to this was occasionally added a drachm of oxymel of squills. Under this course his urine encreased, and about the middle of December, his swellings were entirely removed, but he was reduced to the lowest degree of weakness. His leg still continued to discharge a mixture of pus and serum.

He died from mere debility, in the end of December.

HISTORY XLV.

William Edwards, aged thirty, was admitted Oct. 1792, with ascites and anasarca;
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his face, and the backs of his hands were very much swelled. He took cream of tartar for some time, without effect; afterwards he took squills in substance, and swelled more. He then had draughts with gamboge and calomel, and the use of the latter was pushed, as the swelling went on rapidly, so as to affect his mouth in the course of a week. The spiritus ætheris vitriolici was then added to the course. On the 14th of November, the swellings were not decreased, but his mouth was still sore. I ordered him half a drachm of Dover's powder, at bed-time, which he rejected; however, he sweated considerably, and two days after, passed a good deal of water, with the effect of lessening the swellings. His cough now became troublesome, and he complained of general pains: he was ordered a dose of the diaphoretic mixture, (antimonial wine with laudanum) every night at bed-time. On the 23d Nov. the report is, "swellings almost gone." A
pneumonic

pneumonic affection supervened, and carried him off.

BARK, WITH TINCTURE OF CANTHARIDES.

HISTORY XLVI.

Henry Kay, aged eleven years, after recovering from the scarlatina anginosa, became affected with general dropsy. He was ordered a mixture with bark, and tincture of cantharides, and recovered in the course of a month. There was reason to fear, at one period of his disorder, that effusion had happened in the brain, for he was seized with epileptic fits, to which he had never before been subject, and after the cessation of the fits appeared comatose. In this emergency, his temples were blistered.

HISTORY XLVII.

Evan Ellis, aged eight years, was seized with anasarca and ascites, after an attack of

the scarlatina anginosa. He took the bark mixture, with tincture of cantharides, and was cured in the space of three weeks.

HISTORY XLVIII.

James Shaw, aged six years, had ascites and anasarca, after the scarlatina anginosa. He recovered by the same method, in a few weeks.

HISTORY XLIX.

Mary Hulse, aged twenty-six, after a tedious, irregular fever, which had been attended with pneumonic, and sometimes with hysterical symptoms, became anasar-cous. She took the bark mixture, with tincture of cantharides, and sometimes with the addition of some oxymel of squills. She recovered in a short time.

NICOTIANA.

HISTORY L.

Thomas Brickhill, aged forty-five, after a long series of pneumonic and dyspeptic complaints,

complaints, became generally dropsical. From the degree of orthopnoea and cough under which he laboured, there was even reason to suppose that effusion had taken place in the chest. He was put upon a course of cream of tartar, afterwards of digitalis, with occasional doses of gamboge and jallap, without obtaining any relief. As his swellings became very great, and his complaints extremely distressing, I ordered him to use the tinctura nicotianæ in small doses. This produced an immediate increase of urine. It was therefore pushed to the dose of twenty drops, four times a-day. The swellings now decreased very slowly, and though he used tonics, his stomach was sometimes unable to retain the full dose of the tincture; it was therefore varied, according to circumstances. He persevered in the use of the remedy for several months, till a complete cure was obtained.

GAMBOGE.

HISTORY LI.

J. Edwards, was admitted March 19th, 1792, ill of ascites and anasarca. He was directed to take five grains of gamboge, with two drachms of spiritus ætheris vitriolici, in a draught, twice or thrice a week, according to its operation. This composition acted as a gentle purgative, encreased his urine, and cured him in a few weeks.

HISTORY LII.

Ann Calvert, about thirty years of age, complained of great dyspnœa, dry cough, and pain of her breast. Respiration was stridulous, and her pulse frequent. Dec. 3, 1794, I directed her to lose ten ounces of blood, and to take the laxative pectoral electuary. On the 9th, the dyspnœa and pain, though easier, being still considerable, a blister was applied to her breast. Three days afterwards, the bleeding was repeated, and

and she was blistered between the shoulders. On the 9th of January, her feet and abdomen began to swell, and her urine became deficient; she was then put on a course of cream of tartar, which was continued without relief, till the 27th of March. She was then ordered to lose nine ounces of blood, and to take the infusum digitalis, in increasing doses. This was continued, to no purpose, till the 24th of April, when the course was changed to the following bolus.

R Pulv. Scill. Arid. gr. iij.

Calomelan: gr. j.

Sapon. Hispan. gr. x.

Syrup. q, s. ut f. Bolus, omni nocte, hora somni, sumendus.

She was now so much disposed to costiveness, that it was necessary to augment the calomel to four grains in each bolus. She was discouraged by experiencing no relief, and attended with no great regularity, till the 4th of September, when the boluses were discontinued, and she was put on a course of Bacher's tonic pills. On the 18th, the pills were increased to twenty-one a-day, but she

was so far from being relieved, that it was necessary to bleed her again, on the 29th. Oct. 9th, she was more swelled: she now took thirty of the tonic pills daily. On the 27th, I directed three grains of squills, ten grains of nutmeg, and half a grain of opium, to be taken every night, continuing the tonic pills by day. Nov. 6th, no progress being made, I changed her medicines again, and determined to try the effect of digitalis in substance. It was pushed to the extent of four grains a-day, with a pint of the cerevisia diuretica. On the 20th, the swellings were lessened, but in a few days she grew worse again. She then took six grains a-day, and persisted, without farther relief, till the 4th Dec. 1794. I then ordered her five grains of gamboge, with a drachm of spiritus ætheris nitrosi, every night in a draught, and a mixture with spiritus ætheris vitriolici, by day. This course kept her bowels gently open, increased her urine, and relieved her breathing in a remarkable degree. Dec. 18th, the swellings were falling; but a hard frost renewed

renewed the dyspnœa on the 22d. Jan. 5, her swellings were nearly gone, but the dyspnœa was still considerable.

HISTORY LIII.

Mary Hitchcock, aged forty-eight, had long been affected with general pains, incessant cough, with great expectoration, flatulence, and spasmodic affections of the bowels. These complaints terminated in ascites and anasarca. She took the tonic pills, with the occasional interposition of the gamboge draught, for a month; her swellings abated; but after another fortnight, they returned. She then took the decoction of golden-rod for a fortnight, during which her swellings again lessened, her urine was much increased, her appetite improved, and her bowels were kept moderately open by the decoction. Costiveness and dysuria then came on, which were relieved by occasional doses of calomel; the swellings remained stationary, and the golden-rod was continued till our stock of it was exhausted. She was then put on a
course

course of gamboge with cream of tartar, which completed the cure in about a month. This patient was much debilitated, and appeared to be phthisical, before the accession of the dropsy.

CREAM OF TARTAR, WITH DIGITALIS.

HISTORY LIV.

Thomas Bowker, an elderly man, accustomed to the abuse of spirituous liquors, came under my care for acute rheumatism, which was not accompanied with swellings of the joints. In the course of three weeks, the disease was converted to anasarca of the lower limbs, which encreased with such rapidity, that the integuments gave way on one foot, and a discharge of water took place. The abdomen was likewise beginning to fill. He now complained of a tormenting cough, and want of sleep. I ordered him cream of tartar, in the usual manner, every morning, and a grain of pulvis digitalis, with a grain
of

of opium, every night at bed-time. In a few days, his swellings were lessened, and all his complaints greatly relieved. During the severe frost of January and February, 1795, however, his strength sunk, and he died about the middle of February.

VIRGA AUREA.

HISTORY LV.

I have mentioned, in Mardley's case, the good effects of this plant, incidentally. The following is the only other instance of dropsy, in which I have been able to give it a fair trial.

Mary Brown, aged forty-nine, had been ill of ascites and anasarca for two months. After ineffectual attempts with some other diuretics, she was ordered the virga aurea in decoction, the plant being too fresh to be otherwise exhibited. In eight days, the abdomen decreased two inches, but constant sickness and vomiting came on, and it became

became necessary to omit the golden-rod. Imagining that there was an effort of the constitution to terminate the disease by vomiting, as it sometimes happens, I directed three grains of squills every night. Brisk vomiting was excited, her urine encreased, and the abdomen fell an inch and half. This was the last period of success. Incessant vomiting continued, without farther diminution of the swellings, in spite of opiates. The mercurial friction was attempted, but notwithstanding every exertion, she became comatose, and expired.

HISTORY LVI.

Alice Boardman, aged fifty, was ill of ascites; she had been tapped, and when I saw her was suffering so much pain from the distention of the abdomen, that it was necessary to repeat the operation. Nine quarts of water were drawn off. After a short, ineffectual trial of digitalis, I put her on a course of cream of tartar, by which her size was lessened, and continued to be reduced during a fortnight. It ceased at length

length to purge her, and gamboge was interposed. But finding, after a week's farther trial, that the cream of tartar had lost its effect, though given in encreased doses, I dropt it, and directed a course of calomel with squills. This seemed at first to have some effect, but soon lost its power. The tonic pills, and afterwards mercurial friction, were employed with no better success. She died, two months after admission.

On reviewing the events of these cases, the preference I had determined to give the cream of tartar, in dropsical diseases, appears fully justified. Of thirty-three cases in which I have used this remedy, since the publication of my former volume, twenty-four have been cured, and two relieved: of the number cured, two were cases of hydrothorax, fifteen were the most dangerous complications of dropsy, five were cases of ascites alone; the rest of anasarca. I have purposely omitted several slight cases, and on the contrary, I have excluded other cases, where the imminent hazard of the patient's life afforded

no time for the fair trial of medicines. The digitalis appears, in this set of cases, to great disadvantage indeed; but I confess, that my attention has been diverted from it, by my success with cream of tartar, a remedy liable to no bad consequences, from indiscretion either of the practitioner, or the patient. I am of opinion, however, that the employment of digitalis, as a secondary remedy, of which Bowkers's case is an example, may be attended with the best effects, and it cannot be denied, that sometimes, as in HIST. VIII, digitalis will succeed when other remedies have failed; but this happens with many other diuretics.

To arrive at more just conclusions, it will be proper to compare the result of all the cases of dropsy, mentioned in these volumes.

Cream of tartar has been given in forty-three cases; of these, thirty-three have recovered;*

* Three patients, marked as convalescents in the former volume, were completely cured.

nine have died; three have been relieved.

Digitalis has been given in twenty-nine cases, of which eleven were cured; seven died; two were relieved; nine were not relieved.

The tonic pills have been given in twelve cases, of which six were cured; three died; two were greatly relieved; another received no benefit.

The bark, with tincture of cantharides, cured four cases of dropsy from conversion, and relieved Ramsden more than any other remedy had done.

The cases of Coxe, and Mary Smith, afford two rare instances of the beneficial effects of mercurial friction, joined with a diuretic, in dropsy of the ovarium.

The other remedies were given in too small a number of cases, to justify any general conclusion.

It

It appears evidently, from this comparison, that the greatest proportion of cures, out of an hundred and three cases, has been incontestably effected by cream of tartar.

That digitalis has produced a smaller number of cures, in proportion, than any other medicine employed.

That it is useful, in some habits, to exchange the employment of cream of tartar, for that of digitalis; or perhaps more frequently to unite their action, by exhibiting digitalis in the evening, when the purgative operation of cream of tartar, for the day, is exhausted.

That the employment, and especially the repetition of tapping, tends to accelerate the subsequent accumulation in ascites.

That in exhausted dropsical habits, where there is no permanent obstruction of the viscera, or where such an obstruction has been

been removed by other remedies, tonics may be advantageously joined with stimulating diuretics.

That the free, and long-continued use of mercury, sometimes brings on a depression of strength, and irritability of the bowels, from which it is difficult to recover the patient.

Lastly, that when diuretics act successfully, they in most cases operate early. Hence the advantage of exchanging diuretics, at the beginning of the disease. It appears, likewise, from some of these cases, that the employment of a diuretic, which had failed at the commencement, may be resumed at a subsequent period of the disorder, with success.*

The power of cream of tartar, in curing hydrothorax, is completely established, by two cases in this volume, those of Bradshaw and Newton, (HIST. I. and VII,) added to

* Hist. xx, of this volume.

those of Farrer, Bayley, and Monk, in the former. Bradshaw relapsed twice, and Monk once, but both were cured by repeating their medicines. My observations thus support the opinion, delivered by some judicious authors, that hydrothorax alone is not an intractable species of dropsy.

In HIST. XXIII, of this volume, a remarkable instance appears of the hydragogue power of cream of tartar, even when it exerted no other sensible effect on the system.

The greatest inconvenience which I have experienced, in using this medicine, is, that in some habits it soon loses its purgative effect, and with that its hydragogue power. It then becomes necessary to give it in doses so bulky, that they are apt to offend the stomach. This might be avoided, by quickening it occasionally by the addition of a little gamboge. Formerly, it was supposed that the occurrence of a diarrhoea checked the flow of urine; in the action of cream of tartar, I have had frequent proofs of the fallacy

fallacy of this remark. The patients themselves have often observed, that the swellings abated, and the urine flowed more largely, as they were more briskly purged by that remedy. Even *digitalis* sometimes purges, during a successful exhibition. In the case of Dewrden, (vol. 1.) and in another, of which I have preserved no other particulars, the action of *digitalis* supported a gentle diarrhoea, through the whole progress of the cure.

It appears, from HIST. XXXVIII, of this volume, that when ascites and anasarca are complicated, in debilitated habits, the anasarca sometimes gains upon the trunk of the body, while the ascites is lessening by proper remedies. From the same case, and from HIST. XVI, it also appears, that high, puffy swellings, on the backs of the hands, are dangerous signs, in such complications.

The golden-rod, anciently of great fame in nephritic and dropsical disorders, operates, in the dose of half a drachm of the dried

N 2

powder

powder, given three times a-day, as a gentle purgative, but does not prove very diuretic (HIST. XX, XLVIII, and LV.). I may be allowed to mention here, that I have used it in several nephritic cases with success, in that dose. It is much more mucilaginous than the uva ursi, and is an agreeable bitter, with little or no astringency. BARCLAY has given a description of this plant in his *Satyricon*, which proves, that if botanical Latin is sometimes barbarous, or inelegant, the fault does not arise from the nature of the subject.

“ Hæc lanceatis foliis, piloque ita brevi,
 “ ut pene curiosos oculos fallat, crenis deni-
 “ que tenuibus, et sæpe in obtusam speciem
 “ oras secantibus, mediocriter assurgit. Ra-
 “ dix caulisque lignea, subtiliorem succum
 “ in herbam transferunt. Planta ad inge-
 “ nium terræ nunc cubitalis, plerumque
 “ eminentior; insigne fastigium floribus ad
 “ examen turgentibus cingit, & VIRGÆ
 “ AUREÆ sortita est nomen, sive quod aureæ
 “ ac pene divinæ virtutis est, sive quod
 “ præstantis

“præstantis metalli colorem exigui floris
 “venustas æmulatur. Cæterum contusum
 “in renibus calculum in innoxium pulverem
 “solvit. Non in latere, non in vesica dolor:
 “adeo ut tam facili remedio pudeat calculum
 “timuisse.”—This eulogium, it must be
 “owned, is a little rhetorical. The *virga*
aurea is, indeed, an useful remedy in neph-
 ritis, but not more so than the *uva ursi*, or
 perhaps than many other bitters. I have
 always used it without opium.

In HIST. XLII, the diuretic effect of mer-
 curial friction, joined with *spiritus ætheris*
vitriolici, was so powerful, as to produce a
 constant flow, amounting to an incontinence
 of urine, in a very old, and much enfeebled
 subject. The inconvenience was, in that
 case, removed by tonics: I have found it,
 in a smaller degree, produced by other
 combinations of diuretics, in old persons,
 but I do not remember to have seen it
 troublesome, excepting in cases where mer-
 cury had been freely used.

Upon the whole, I think, we may conclude, that slow and gentle methods of treatment ought to be instituted, in all cases of dropsy in which the general habit is affected, either by visceral obstructions, or by the length of the disease. That from the junction of cream of tartar with digitalis, interposing purgatives occasionally, much may be hoped; and that mercury should be considered as a resource, only after the failure of milder remedies, which produce a less sudden, and less permanent impression on the constitution.

The additional experience of thirteen years has confirmed the opinions contained in these pages. I still find cream of tartar a sure and powerful hydragogue; while digitalis occasionally operates with astonishing success as a diuretic, but cannot be depended on in this respect or as a hydragogue. Some particular occurrences, however, have led me to alter my practice in dropsy, and I think, with considerable advantage.

advantage. In 1795, I had tried many of the usual diuretics in a case of general dropsy, without success. A large increase of urine was suddenly produced by a farrago of liquid diuretics, which was clandestinely administered, and the prescription was afterwards shewn to me. The formula appeared ridiculous; but its efficacy led me to consider, that we are apt to simplify our prescriptions too much, and that we may sometimes lose, in this manner, the benefit of fortunate combinations. A case soon afterwards occurred, of anasarca, ascites, and hydrothorax in conjunction, which was not relieved by the usual methods. The patient, suffering under a dreadful dyspnœa, intreated that some new plan might be tried, and I determined to order a combination of liquid diuretics. The immediate success was beyond my hopes; a large flow of urine was promoted, and the patient's breathing was, for a time, completely relieved, though the ultimate event was unfavourable. Since that period, I have used this formula,

N 4

under

under the title of diuretic drops, generally in the following manner :

R/ Oxymel. Colchic.

----- Scill.

Tinctur. Nicotian.

Sp. Æther. Nitros. āā p. æ. Misce. Capiat cochleare parvulum, ex Aquæ pauxillo, quater in die.

When an additional stimulus is wanted, in debilitated habits, about ten drops of tinctur. cantharid. are added to each dose.

The usual quantity of cream of tartar is given early every morning, and the patient begins to use the diuretic drops, in the forenoon. In very costive habits, it is sometimes advantageous to add a portion of syrup of buckthorn to the farrago, and I frequently join the tincture of digitalis to it, in such doses as the patient can easily bear. When there is imminent danger of suffocation, from the quantity of water effused, in hydrothorax, I have frequently given immediate relief, by the following purgative draught.

R Cambog. gr. iv.
 Sp. Æther. Nitros. ʒj.
 Tinctur. Senn. ʒij.
 Syrup. Rhamni.
 Aq. Menth. āā ʒss. Misce.

A draught of this kind may be given twice or thrice a-week, in such cases, while the cream of tartar, and diuretic drops, are employed in the intermediate days.

By this plan of treatment, I have succeeded in several cases, where the prospect of a cure was very unfavourable at the commencement, and I believe that the action of the kidneys may be very generally excited in this manner.

After long and extensive experience of the qualities of camboge, I can recommend it as one of the gentlest, most certain, and least nauseous laxatives in the *Materia Medica*. Being nearly free from either smell or taste, it is particularly well adapted to the management of children, with whom its anthelmintic power is likewise valuable.

A very



A very commodious form of exhibiting it, is a solution in distilled water, in the proportion of half a grain of gamboge, to half an ounce of water. A table spoonful may be given to an adult, every hour, till it operates. A tea-spoonful of this solution, given in the same way, is a dose for a child, under twelve years of age. When given in this manner, doses of seven or eight grains have been found necessary to move the bowels, and it has proved strongly diuretic.

Simple hydrothorax is very much under the command of cream of tartar, the gentle operation of which renders its continued use perfectly safe for a long period.

I shall just add, that in some habits, the combination of tincture of squills with syrup of buckthorn, proves very powerfully diuretic.

I have not formed a high opinion of tincture of Lytta, as a diuretic. I have
repeatedly

repeatedly found that it stimulates the neck of the bladder violently, and produces incessant efforts to part with urine, without actually increasing the quantity of the secretion. It sometimes appears to succeed, in combination with other diuretics.

I have been induced, by some recent cases, to adopt the early use of the extract of elaterium, in dropsy, and I have found it a remedy of the first class. From the uncertainty and roughness of its operation, this valuable medicine has been too little employed. The effects of very small doses, such as a quarter of a grain are sometimes very distressing, especially the nausea, and I have seen it produce severe purging in this dose. But it is not merely a powerful hydragogue. It appears to stimulate the absorbent vessels in a particular manner, from the rapid removal of serous effusions which characterizes its action. I shall briefly state some of the cases, in which I have used it. An elderly gentleman

gentleman had laboured under general dropsy for several months; the symptoms of effusion in the chest were peculiarly distressing. In spite of all the usual remedies the swellings continued to increase, till it was thought advisable to tap the abdomen, merely to prevent suffocation. In this desperate situation, I thought it right to try the extract of elaterium, before the operation. It was given in half-grain doses, and produced an immediate large increase of water, very liquid stools, and an abatement of the dyspnœa and cough. We pursued this plan steadily for several weeks, in the course of which he was completely emptied of the effused fluid: his pulse became strong and regular; and he was able to walk about his garden. He unfortunately went to the distance of some miles, to dine with a friend, on one of the stormy days in the beginning of June, 1809, and caught a severe cold, which brought on chronic inflammation of the pleura and occasioned his death.

About

About the same time, I attended a lady, upwards of eighty years old, who had most decided symptoms of hydrothorax; she had also ascites and anasarca. She had been long unable to lie down in bed. After using the extract of elaterium, in half-grain doses, for a short time, her breathing was relieved, and she was able to enjoy comfortable sleep. Her swellings were also much reduced, and though not cured, she was enabled to visit her friends, and her life was evidently prolonged, as well as rendered more comfortable.

In two other cases of hydrothorax, one with ascites, the other un-complicated, perfect cures were obtained, after every other method had been unsuccessfully employed.

In consequence of the severe action of this medicine on some habits, I now begin with the dose of the sixteenth part
of

of a grain only. This is repeated, according to the effect produced on the stomach, till two, three or four grains a-day are given. The quantity of water brought off by stool surprizes, and sometimes alarms the patient. I have known two quarts of liquid passed by stool, in the course of two or three hours.

But the relief of the symptoms of effusion has always appeared to me more speedy and complete from this, than from any other medicine, in dropsical complaints.

TABLE, shewing the Effects of Diuretics in fifty-six Cases of DROPSY.

<i>Name.</i>	<i>Age.</i>	<i>Species of Dropsy.</i>	<i>Remedies.</i>	<i>Event.</i>
1 Jos. Bradshaw	47	Hydrothorax	Cream of Tartar	Cured.
2 Magdalen Cross	74	Anasarca	Cream of Tartar	Cured.
3 John Beswick	58	Anasarca	Cream of Tartar	Cured.
4 Joseph Wilcock	37	Anasarca	Cream of Tartar	Cured.
5 John Clough	50	Anasarca	Cream of Tartar	Cured.
6 John Birch	25	Ascites and Anasarca	Cream of Tartar	Cured.
7 Mary Newton	35	Hydrothorax	Cream of Tartar	Cured.
8 A. F.	60	Ascites, Anasarca, and Hydrothorax	First Course, Cream of Tartar	Relieved.
			Second Course, Digitalis	Cured.
9 Eliz. Wells	58	Ascites and Anasarca	Cream of Tartar	Died.
10 Mary Williams	2	Ascites and Anasarca	Cream of Tartar	Cured.
11 Ann Lees	30	Ascites	Cream of Tartar	Cured.
12 John Roberts	50	Ascites and Anasarca	Cream of Tartar	Cured.
13 John Campaign	25	Anasarca	Cream of Tartar	Cured.
14 John Taylor	30	Ascites and Anasarca	Cream of Tartar	Cured.
15 Mary Leech	48	Ascites and Anasarca	Cream of Tartar	Cured.
			First Course, Mercurial Friction, with Spiritus Ætheris Vitri- lici	Not relieved.
			Second Course, Gamboge, with Cream of Tartar	Died, after the removal of the swellings.

<i>Name.</i>	<i>Age.</i>	<i>Species of Dropsy.</i>	<i>Remedies.</i>	<i>Event.</i>
16 Frances Clough	74	Ascites, Anasarca, and Hydrothorax	Cream of Tartar, Gamboge, with Sp. Ætheris Nitrosi	Died, Cured.
17 Mary Thompson	30	Ascites	Cream of Tartar	
18 Mary Smith	42	Ascites and Hydrops Ovarii	First Course, Mercurial Frictions, with Sp. Æther. Vitriolici	Hydr. Ovarii relieved. Ascites, not relieved.
19 Peter Morgan		Ascites and Anasarca	Second Course, Cream of Tartar, Cream of Tartar	Cured. Relieved.
20 John Mardley	60	Ascites and Anasarca	First Course, Cream of Tartar, Second Course, Virga Aurea Third Course, C. of Tartar again	Not relieved. Relieved. Cured.
21 Sarah Hughes	50	Ascites	Cream of Tartar	Cured.
22 George Musgrave	30	Ascites and Anasarca	Cream of Tartar	Cured.
23 Mr. T.	50	Ascites and Anasarca	Relapsed, Gamboge	Died.
24 William Bradley	8	Ascites and Anasarca	Cream of Tartar	Cured.
25 George Adams	1½	Ascites	Cream of Tartar	Cured.
26 Ruth Ratcliff	25	Ascites and Anasarca	Cream of Tartar	Died.
27 John Wood	45	Ascites and Anasarca	Cream of Tartar	Cured.
28 Wm. Winterburn	58	Ascites and Anasarca	Cream of Tartar	Cured.
29 Mary Byrom	43	Ascites	First Course, Cream of Tartar Second Course, Tonic Pills	Relieved. Cured.

Name. Age. Species of Dropsy.

Remedies.

Event.

30	Mary Bury	9	Ascites	Cream of Tartar	Died.
31	Martha Yates	23	Ascites and Anasarca	Cm. of Tart. Mercury. Puncture	Died.
32	Robert Berry	45	Anasarca and Ascites	Cream of Tartar	Cured.
33	Ellen Green	18	Ascites and Anasarca	Cream of Tartar	Cured.
34	Sarah Duxbury	18	Anasarca	Digitalis	Cured.
35	Ann Brown	69	Ascites and Anasarca	Digitalis	Died.
36	Peter Lomax	21	Ascites. Dilated Heart	Digitalis	Died.
37	John Jones	48	Ascites and Anasarca	Digitalis	Died.
38	William Exell	.	Ascites and Anasarca	Tonic Pills	Cured.
39	Henry Robinson	63	Ascites and Anasarca	First Course, Digitalis	} Died.
40	Mary Adshead	.	Ascites	Second Course, Tonic Pills	
41	Ann Hassel	7	Ascites	First Course, Cream of Tartar	
42	John Kearsley	64	Ascites	Second Course, Tonic Pills	
43	Mary Tattersall	23	Ascites	Mercurial Friction and Sp. Æther. Vitriolici	Cured.
44	Valentine Ramsden	47	Ascites and Anasarca	Mercurial Friction and Sp. Æther. Vitriolici	Cured.
45	William Edwards	.	Ascites and Anasarca	Mercurial Friction. Puncture	Not relieved.
				Mercurial Friction. Digitalis.	} Died, after the removal of the swellings.
				Bark with Tinct. Cantharid,	
				Calomel. Dover's Powder	} Died, after the removal of the swellings.

<i>Name.</i>	<i>Age.</i>	<i>Species of Dropsy.</i>	<i>Remedies.</i>	<i>Event.</i>
46 Henry Kay	11	Ascites and Anasarca	Bark with Tinctur. Cantharid.	Cured.
47 Evan Ellis	8	Ascites and Anasarca	Bark with Tinct. Canthar.	Cured.
48 James Shaw	6	Ascites and Anasarca	Bark with Tinct. Canthar.	Cured.
49 Mary Hulse	30	Anasarca	Bark with Tinct. Canthar.	Cured.
50 Thomas Brickhill	45	Ascites, Anasarca, and Hydrothorax	Tinctura Nicotianæ	Cured.
51 J. Edwards		Ascites and Anasarca	Gamboge with Sp. Æth.	Cured.
52 Ann Calvert	30	Ascites, Anasarca, and Hydrothorax	First Course, Cream of Tartar Sec. Course, Infusion, Digit. Third Course, Cal. with Squills Fourth Course, Tonic Pills Fifth Course, Digitalisin Subst. Sixth Course, Gamboge with Sp. Æther. Vitriol.	Not relieved.
53 Mary Hitchcock	48	Ascites and Anasarca	First Course, Tonic Pills. Second Course, Virga Aurea Third Course, Gamboge with Cream of Tartar	
54 Thomas Bowker	56	Anasarca	Digitalis and Cream of Tartar	
55 Mary Brown	49	Ascites and Anasarca	Virga Aurea. Squills	
56 Alice Boardman	50	Ascites	Digitalis. Cream of Tartar. Gamboge. Squills. Tonic Pills. Mercurial Friction	

OF THE
PREVENTION OF FEVERS
in
GREAT TOWNS.

— *semper novis*

Deflenda lacrymis funera, ac populi struem.

Senec. Œdip.

OF THE PREVENTION OF FEVERS IN GREAT TOWNS.

THE prevalence of fevers, in large manufacturing towns, has appeared to me, from personal observation, to be encreased by several causes, the action of which might be weakened by proper care. To these causes I endeavoured to direct the public attention in my last volume; and as my observations chiefly referred to this town, I pointed out the dangerous situation of the poor, to the more opulent inhabitants, in a separate publication, which I shall insert below.

Address to the Committee of Police.

“ Among the objects which engage the attention of this Committee, there can be none more interesting, than the prevention of epidemic diseases among the poor, as far

as it can be accomplished by attending to the most hazardous circumstances of their situation. I hope I shall therefore be excused, for offering a few observations, on the means of opposing the production and progress of infectious fevers, in cellars and lodging-houses, where they reduce great numbers of the industrious poor to extreme distress, and often nearly destroy whole families. In doing this, I shall confine myself to the remarks which have occurred to me, in the discharge of my office of Physician to the Infirmary, as local observations only can be interesting to the Committee."

" 1. In some parts of the town, cellars are so damp as to be unfit for habitations; such places should be reported to the Commissioners, by whom proper representations may be made to the owners, that the cellars may be appropriated to other purposes. I have known several industrious families lost to the community, by a short residence in damp cellars."

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“ 2. The poor often suffer much, from the shattered state of cellar windows. This is a trifling circumstance in appearance, but the consequences to the inhabitants are of the most serious kind. Fevers are among the most usual effects; and I have often met with consumptions which could be traced to this cause. Inveterate rheumatic complaints, which disable the sufferer from every kind of employment, are often produced in the same manner. This source of disease may be expected to admit of easy removal, for it cannot be the interest of the proprietor of a cellar to have his tenants constantly sick.”

“ I have seen large apertures in the walls of a lodging-house, in consequence of which, a patient of mine contracted a consumption; the owner was applied to, in a cold, rainy season, to close the openings, so as to mitigate the patient's sufferings from the severity of the weather; but in vain.”

[A great proportion of the aged poor die of pneumonic complaints and dropsy.]

“ 3. I am persuaded, that mischief frequently arises, from a practice common in many narrow back streets, of leaving the vaults of the privies open. I have often observed, that fevers prevail most, in houses exposed to the effluvia of dunghills in such situations.”

[During the late epidemic, it was observed that the fever prevailed most, in streets which were not drained, or in which dunghills were suffered to accumulate, or where the blood and garbage from slaughter-houses were allowed to stagnate. I do not mean to assert, that such nuisances produce the disease, but they appear to assist its progress, and to operate as remote causes of fever, in whatever manner pathologists may choose to explain their action.]

“ As an example of the injurious effect of these circumstances, I beg leave to point out one family, of the name of Turner, in a dark cellar behind Jackson’s row. They have been almost constantly patients of the infirmary

infirmary for three years past, on account of disorders owing to their miserable dwelling. There are other instances of the same kind in Bootle-street; in one house of the latter street, most of the inhabitants are paralytic, in consequence of their situation in a blind alley, which excludes them from light and air. Consumptions, distortion, and idiocy, are common in such recesses."

" 4. In Blakely-street, under No. 4, is a range of cellars, let out to lodgers, which threatens to become a nursery of diseases. They consist of four rooms, communicating with each other, of which the two centre rooms are completely dark; the fourth is very ill lighted, and chiefly ventilated through the others. They contain from four to five beds in each, and are already extremely dirty."

[A large house, in an airy situation, the remains of an abortive design for a poor-house, has been filled with fever-patients, by

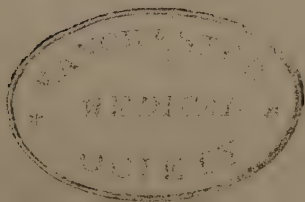


by the admission of fresh air being obstructed. A considerable number of poor families had been lodged in it, for very trifling rents; the building had never been completed, and quickly went to decay. Many of the windows, and the principal entrance were built up, and the fever then became universal in it.]

“ 5. The lodging-houses, near the extremities of the town, produce many fevers, not only by want of cleanliness and air, but by receiving the most offensive objects, into beds, which never seem to undergo any attempt towards cleaning them, from their first purchase till they rot under their tenants. The most fatal consequences have resulted from a nest of lodging-houses in Brooks’s-entry, near the bottom of Long-mill-gate, a place which I beg leave to recommend to the serious attention of the committee. In those houses, a very dangerous fever constantly subsists, and has subsisted for a considerable number of years.

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I have known nine patients confined in fevers at the same time, in one of those houses, and crammed into three small, dirty rooms, without the regular attendance of any friend, or of a nurse. Four of these poor creatures died, absolutely from want of the common offices of humanity, and neglect in the administration of their medicines. In some other houses in the same nest, I have known a whole swarm of lodgers exposed to infection by the introduction of a fever-patient, yet so far infatuated, as to refuse to quit the house, till all of them have been seized with the disorder. It must be observed, that persons newly arrived from the country are most liable to suffer from these causes, and as they are often taken ill within a few days after entering an infected house, there arises a double injury to the town, from the loss of their labour, and the expence of supporting them in their illness. A great number of the home-patients of the Infirmary are of this description. The horror of those houses cannot



cannot easily be described; a lodger fresh from the country often lies down in a bed, filled with infection by its last tenant, or from which the corpse of a victim to fever has only been removed a few hours before."

"Another set of lodging-houses constantly infected, is known by the name of the Five Houses in Newton-street. The continuance of fevers among them seems to arise from their being over crowded, and very dirty."

"6. The best method, perhaps, of giving an effectual check to these evils, would be to oblige all persons letting lodgings to take a licence, and to limit them in the number of their lodgers. By the terms of the licence, they might also be obliged to white-wash their houses twice a year, which is a powerful method of preventing infection. When a fever appears in a house full of lodgers, all who are uninfected should be immediately removed to a clean house, and their clothes should

should be washed and scoured. When the fever has ceased, the bed-clothes and curtains of the infected room ought to be scoured, or otherwise cleaned, and a fresh application of white-washing should be made. With proper care, indeed, the worst kind of fever may be confined to the patient's room, without danger to the rest of the family; but no dependance can be placed on the conduct of the persons to whom I allude."

"When the sick are destitute of beds, they should be supplied by the town. It is obvious, that fevers, slight in their commencement, must be greatly aggravated, and must often become dangerous, when the patient lies on a few rags, in a cold garret, or damp cellar."

[When the late epidemic was at its height, a subscription was begun for supplying the sick poor with beds, clothing, nurses, and food. With much benefit, considerable abuses resulted from this plan, great numbers

bers of the poor applying to the Infirmary, under pretence of sickness, for the sole purpose of profiting by the subscription. It was therefore thought more adviseable to promote subscriptions for the relief of the poor in general; as exposure to hunger and cold had always preceded the fever, in those families where it proved most general, and most obstinate.]

“7. This plan would require the appointment of Inspectors of lodging-houses, whose business it would be to visit houses which should be reported to them as infected, either by the neighbours, or by any medical gentleman, under whose observation such places should fall. They should be empowered to take proper steps for checking infection wherever it appears, and occasional enquiries might be made, respecting the compliance of persons letting lodgings with the condition of their licences. This would answer a very desirable purpose respecting the police, independent of the advantages proposed regarding health.

health. The keepers of the lodging-houses might be required to give an account of the name and occupation of every lodger whom they receive, and to become responsible, to a certain degree, for the truth of these reports. By this means, a constant check might be maintained on houses, which at present are the refuge of the most profligate and dangerous part of society."

" 8. There is a practice very common in small new buildings, which ought to be discouraged; that of putting up fixed casements. Some part, if not the whole of the window should always be moveable, especially where there is but a single window in the room. From the want of such a regulation, I have been often obliged to order several panes to be taken out of the window of a fever-room, to obtain a tolerable degree of ventilation."

" 9. It is sometimes difficult to prevent the master of a lodging-house from turning
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a patient out of doors; in the height of a fever, when he apprehends that his other lodgers will desert him. Some interposition of authority should take place, in such cases, both for the sake of humanity, and to prevent the unfortunate patient from spreading the disease into a fresh house."

" 10. When a house is infected in every room, a nurse should be provided, on whom dependance can be placed, to prevent unnecessary visits from neighbours and acquaintances. About two years ago, a fever of the worst kind was carried from a lodging-house, in Salford, where it had attacked all the inhabitants, to another in Milk-street, near the Infirmary, where it seized several persons, in consequence of a thoughtless visit, made by an acquaintance lodging in Milk-street. In this way, fevers are sometimes introduced among the servants in opulent families."

[Another common mode of propagating contagion,

contagion, is the sale of infected clothes, from houses where the fever has run through all the inhabitants. The Committee for the general relief of the poor, have very properly directed their visitors, to see all infected rags burnt, when they supply poor families with fresh clothing.]

“ 11. The prevalence of fevers, among persons employed in cotton mills, might be lessened, by an attention on the part of the overseers, to the following circumstances, besides a due regard to ventilation. Personal cleanliness should be strongly recommended and encouraged ; and the parents of children so employed, should be enjoined to wash them every morning and evening, to keep their shoes and stockings in good condition, and above all never to send them to work early in the morning without giving them food.”

“ It is greatly to be wished, that the custom of working all night could be avoided.

The continuance of such a practice cannot be consistent with health, and I am glad to find that it does not prevail universally."

"Great benefit would be derived, in such situations, from cold bathing, if the poor could be induced to use it once or twice a week, during the whole year. It would counteract the bad consequences of the want of clothing, on the change of which health is known so much to depend; and it would lessen the frequency of rheumatic complaints, by inuring those whose situations expose them the most, to the vicissitudes of the seasons, or sudden alterations of temperature. This would be best done by furnishing public baths for their use."

"Many other circumstances might be pointed out, which are of great importance in preserving the health of the poor, but I am afraid of intruding too much on the patience of the Committee. As the circumstances to which I have adverted, have been
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impressed on my mind by repeated, actual observations, and as the evils they produce are of the most serious and alarming nature, I should have deemed myself wanting in my duty to the public, if I had omitted to lay these reflections before the gentlemen of the Committee, at a time when they are occupied with plans of public utility. If their attention should be thus excited, to a subject so important to the general good, my design will be fully answered."

A committee was at that time appointed, for regulating the police of the towns of Manchester and Salford, and as they saw the magnitude of the evils displayed, and entered with zeal into my views for their alleviation, there was reason to hope that beneficial measures would be pursued. Private interests, however, prevailed over those of the public, and nothing effectual was done. The years 1792 and 1793 passed over, without any extraordinary encrease of fever-patients, though the noxious effects of the nuisances I had mentioned were always

apparent. But in the summer and autumn of 1794, the usual epidemic fever became very prevalent among the poor, in some quarters of the town, particularly after a bilious cholic had raged among all ranks of people. To the ordinary causes of fever were now added, the influence of a burning summer, succeeded by very wet, but yet warm weather, and the want of clothing, and failure even of necessary food, in many families, occasioned by the decay of trade, and the great numbers of workmen enlisted in the army, who left their children to the slender support which could be earned by the labour of the mother. In many instances, I have found that for three or four days before the appearance of typhus in a family, consisting of several children, they had subsisted on little more than cold water. Many of those persons were strangers, and not entitled to, or unable to obtain the pittance afforded by the poor-laws. Even when that relief could be procured, it was very inadequate to the wants of a numerous family. Those who are accustomed to affluence

fluence and ease, would shudder at the idea of supporting a sickly mother, encumbered with the charge of four or five infants, on an income of two shillings a week; this, however, is the parochial allowance in cases of illness. The pain and horror of these situations were often greatly aggravated, by the confinement of the patients in small, dark cellars, where five or six miserable creatures sometimes lay ill together, in the hottest weather; where the dead remained for whole days by the side of the survivors, and where delirium and insensibility were states to be envied.

In the months of November and December, an hundred and fifty-six patients in fevers sometimes applied weekly at the Infirmary, to be visited at their own houses, and though a severe frost took place in the end of December, yet the number of patients was not diminished towards the middle of January, 1795.

The influence of hard frost in abating fevers, cannot be immediately perceived. Many patients must have received the contagion, and others must feel the first symptoms of the disease, about the commencement of the frost: in these persons the disease must run its course. It is in the period of a fortnight or more, that the effect of the cold weather appears. This consideration accounts for the seemingly singular fact, that the epidemic fever of Philadelphia ceased in moderately warm weather.

The symptoms of this disease were nearly similar to those of the epidemic fever of 1790, 1791, which I have described elsewhere. In cases where early assistance was sought, and medicines and necessaries were supplied, this fever seldom proved fatal. During the continuance of the hot weather, indeed, I met with some cases, in which the type of typhus was assumed, as early as the fourth or fifth day, and a comatose state came on, which terminated in death.

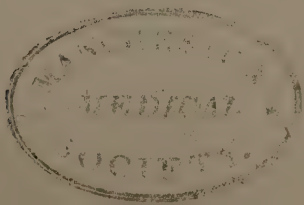
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This fever did not seem to be more contagious in its nature, than the cases which had been always occurring, though in smaller number, since the last epidemic. In 1792, I had two patients ill of typhus, in an infected lodging-house. I desired that they might be washed with cold water, and a healthy, ruddy young woman of the neighbourhood undertook the office. Though apparently in perfect health before she went into the sick chamber, she complained of the intolerable smell of the patients, and said she felt a head-ach, when she came down stairs. She sickened, and died of the fever, in three days.

About the same time, I met with a remarkable instance, of the case with which contagion may be confined within certain bounds. A house, in a very confined situation, had been infected, during several years, in three of the rooms, and at one time, when the whole family was ill, four persons died from want of the common offices of a nurse. During all this time, an

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elderly couple, who lodged in the fourth room, separated from the infected only by the narrow staircase of the house, preserved themselves from the disorder, merely by avoiding all communication with the rest of the family.

Conversions to dropsy were much more common than usual, in this epidemic.

I met with several instances of the conversion of typhus to the scarlatina anginosa, and the contrary, in autumn, 1794. In such cases, dropsy supervened more early, and was more obstinate than usual.

As I had touched very slightly on the unhealthiness of cotton-mills, in the observations addressed to the Committee of Police, I shall add a few remarks on that subject.

Whether the infection of fever is ever generated in cotton-mills, has been disputed. Whatever may be said on that subject, there can be no doubt, that cotton-mills, as they
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are frequently managed at present, contribute powerfully to preserve and extend contagion. A great number of dirty people are confined together, during the best part of the day, in rooms, much warmer than the external atmosphere, into which little fresh air is admitted, and where the floors and the machinery are sometimes filthy beyond belief. The convalescents from infectious fevers are also admitted to resume their employment, without the use of any method, for purifying their clothes or persons from contagion; even those who retain their health, in infected houses, often carry a quantity of infection, attached to their clothes, into the working-rooms. The practice of working all night, still continued in some cotton-mills, must be added as a cause of fever. During the night, the persons employed are more solicitous to exclude the external air, while the atmosphere of the rooms is farther vitiated, by the number of candles. Watching is particularly severe, and prejudicial to children, at the early age when they begin to be employed

employed in these works, nor is their repose rendered sufficiently comfortable. When their night-task is finished, they commonly lie down in beds, which have been just quitted by other children who labour during the day. This is, alone, a very noxious practice. But such is the natural appetite for fresh air, that many of these little creatures prefer rambling in the fields, during part of the time allotted to them for sleep.

I am happy to observe, that this cruel and injurious custom is now declining, and that in some extensive cotton-mills, it is entirely abolished; the proprietors justly conceiving, that there are sacrifices of health and life, for which no pecuniary advantage can compensate.

It must be observed, that the disadvantages of such works, result from inattention to cleanliness and ventilation, for there can be no reason why a cotton-mill should be particularly unhealthy; on the contrary, I am satisfied, from the experience of a friend, who

who has directed a large one for several years, that by frequently washing the floors and frames, and by admitting fresh air, a cotton-mill may be rendered as healthy as a private house.

There is, undoubtedly, considerable difficulty in preserving large rooms in a healthy state, where many persons are constantly confined, as we experience too much in hospitals. In cotton-mills, where they continue to work during the night, therefore, it can scarcely be expected, that the health of the labourers should be completely secured; but when the mill is empty, during the whole night, an opportunity is afforded for complete ventilation, and in such cases, the labourers, when kept tolerably clean, are perhaps less exposed to disease, than in their own habitations.

When we examine the history of some epidemics, of the plague of Marseilles, for example, or the late fever in Philadelphia, it appears that those disorders have grown by neglect,

neglect, and have disappeared before vigilance. While the ravages of contagion are confined to the more unprotected class of the poor, the opulent and the busy, far removed from the sight of misery, little suspect the horrors with which they are surrounded. Their attention, when at length roused, by the approach of danger to their own threshold, often proves prejudicial at first, because it rises to alarm and panic. It is then, that fear, overpowering every principle, and every affection, prepares new dangers by the extravagant selfishness of its exertions.

The sick are sequestered from every means of relief, the dead are allowed to putrify in heaps, or are scarcely covered from the sight of the survivors, while the suspicion of infection, equivalent to a sentence of death, pursues every one, who has paid the coldest offices of charity to the sufferers. Under this dominion of inhumanity, destruction is carried to its utmost height, till the very extremity of danger
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excites men to counteract it. From the moment, that the sick are treated with kindness, instead of being avoided with horror; that houses are purified, instead of being shut up; and that the dead are interred at a sufficient depth, the pestilence, of whatever nature, begins to decline, and then gradually ceases. Less alarming epidemics may, therefore, be expected to admit of still speedier alleviation, when they do not depend upon imported contagion, but arise from such local wants and grievances, as have been specified in the preceding observations. Indeed I am persuaded, that the institution of a committee of health, in this, and similar towns, would be a measure of the greatest public utility, and well deserving the attention of the legislature, as the probable means of preserving many industrious families from destruction. If nothing more were done by such an institution, than to lighten the condition of the poor in its most urgent pressure, much good must still arise from it; but if ever the question of public health should be fully investigated

vestigated, more important operations would appear necessary than those which I have referred to.

It is obvious, that much sickness, among the poor, arises from errors, or defects in their lodgings and clothing. These mischiefs may be partially corrected, by occasional subscriptions, and the interference of the opulent in times of alarm and danger, but as soon as the hand of charity is withdrawn, the same evils recur.

The only method by which the poor could be provided with clean and healthy habitations, is the erection of public lodging-houses, on the plan of barracks, or caravanseras. Great numbers of the labouring poor, who are tempted, by the prospect of large wages, to flock into the principal manufacturing towns, become diseased, by getting into dirty, infected houses on their arrival. Others, from want of connections, waste their small stock of money, without procuring employment, and sink under the pressure

pressure of want and despair. If those unfortunate persons had access, on their first arrival, to a public institution, where they could be lodged in clean, airy rooms, and where their residence would quickly become known, they would be saved, at once, from the danger of disease, and the hazard of ruinous idleness. The number of such victims, sacrificed to the present abuses, is incredible. Encouraged by the committee, a nicer regard to cleanliness might be introduced among the poor, they might, particularly, be induced to use the warm or cold bath, according to circumstances, a practice that would prevent many fevers, rheumatic and cutaneous disorders, and would promote an alertness and cheerfulness of mind, which would even improve them as workmen.

Other advantages, of a still more important nature, might be expected from such an institution. One of the strongest temptations to brutal debauchery, is the consciousness of being unnoticed, or contemned. In manufacturing towns, where
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the youth of both sexes are early able to support themselves by their own labour, and where the nature of their employment produces a constant intercourse between them, licentiousness of manners is carried to the highest pitch. This may be fairly imputed, in great measure, to the unchecked, and disregarded state, in which persons of this class find themselves. For, whatever may be the practice of philosophers, men in general are little disposed to embrace virtue for her own sake, but in obeying her dictates, are apt to keep even her temporal rewards in view. Solitary self-denial, among the labouring poor, is commonly produced, I fear, by avarice. I am far from asserting, that the poor have no virtues; I am convinced that they possess many, by witnessing their conduct every day, in the most trying situations. But I apprehend, that by placing them in a more conspicuous point of view, according to the scheme proposed, where they would come under the inspection of a respectable public body, a powerful motive

would

would be added, to restrain the vicious, and to encourage the well-disposed.

By this means, the retreats of the thief, and the robber, would also be much straitened; for though it would be improper, and indeed impossible, to bring persons into public lodgings by constraint, yet the number of private lodging-houses would be greatly diminished, and if the plan of licensing them were adopted, it would become very difficult for criminals to avoid the pursuit of justice. Thus the two great objects, of preventing crimes, and facilitating the detection of the guilty, would be promoted.

To persons engaged in sedentary employments, or in those attended with little bodily labour within doors, which is the case in most of the Manchester manufactories, public lodgings might contribute much to the preservation of health, by affording them opportunities of using some agreeable exercise, such as cricket, on their return from

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work. At present, the workman, after leaving the warehouse, wastes his evening in the alehouse, or strolls about the streets and fields to a late hour, for the purpose of intrigue.

Next to personal cleanliness, and muscular exertion, the preservation of health depends on occasional changes of clothing. How far it would be practicable to promote this, by the aid of a public institution, must be a subject for discussion, if such an institution should ever be established. Infected, or foul strangers, might, at least, be accommodated, at a small expence, with flannel suits, till their own clothes should be washed or scowered, which is practised in some infirmaries, and ought to be insisted upon in all. Clubs are formed, in some parts of Manchester, for procuring clothes at a moderate price, and perhaps an extension of that plan would answer the purpose.

The establishment of sick clubs, at present liable to many abuses, might be advantageously

ously watched over by a committee of health. I have seen repeated instances, in which those clubs have displayed the most unfeeling avarice. It has often happened, that when an Infirmary patient has procured an attestation from me, that he was sick of a fever, his club has delayed the relief due to him for eight or ten days, in hopes, that the disease might cut him off, and deliver them from the burden of supporting him. I have been many times shocked, by the tyrannical conduct of mercenary overseers, who uniformly treat the poor as criminals, whom they are appointed to punish, but when the poor treat each other with cruelty, I learn to make some allowance for the insolence of those petty despots.

The distress and ruin of many families, arise from other circumstances, which might be easily prevented by a public committee. A young couple live very happily, till the woman is confined by her first lying-in. The cessation of her employment then pro-

duces a deficiency in their income, at a time when expences unavoidably encrease. She therefore wants many comforts, and even the indulgences necessary to her situation: she becomes sickly, droops, and at last is laid up by a fever, or pneumonic complaint; the child dwindles, and frequently dies. The husband, unable to hire a nurse, gives up most of his time to attendance on his wife and child; his wages are reduced to a trifle; vexation and want render him at last diseased, and the whole family sometimes perishes, from the want of a small, timely supply, which their future industry would have amply repaid to the public. If such misery occurs, even when the master of the family is industrious and sober, it is easy to imagine the distress of those unfortunate creatures, who depend on a brutal debauchee. The injuries which defenceless women undergo, in those situations, are too horrible for description: I have met with many instances of incurable diseases, occasioned by kicks or blows from
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the husband, in his paroxysms of drunkenness. Scirrhus of the liver, and of the ovarium, and consequently the worst species of dropsy, have been thus produced.

It would be necessary to add a few rooms for the reception of the sick, to every institution of this kind. Those destined for persons who may be seized with fevers, notwithstanding the precautions enjoined, should be so contrived, as to seclude the sick from communication with every one, but the necessary attendants. A false opinion prevails respecting fever-wards: it is supposed that they perpetuate and extend infection. But I entertain no doubt, that under proper management, they would produce the very opposite effect. In our Infirmary, we are perpetually liable to have the contagion of fever introduced, either by the admission of patients in whom the disease is lurking, or by their receiving visits from persons coming out of infected houses. Formerly, when a fever began in

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the hospital, it was found necessary to dismiss almost all the patients, a measure productive of much inconvenience, and general alarm. But since a few rooms were built, in the year 1792, separated from the rest of the wards, for the reception of such cases, though the infection has been more than once introduced, yet by removing such patients as shewed symptoms of fever, at their first appearance, into the secluded ward, and preventing all communication between them or their nurses, and the other patients and servants, the progress of the complaint has been stopped, and no reason has again occurred, for a precipitate discharge of patients.

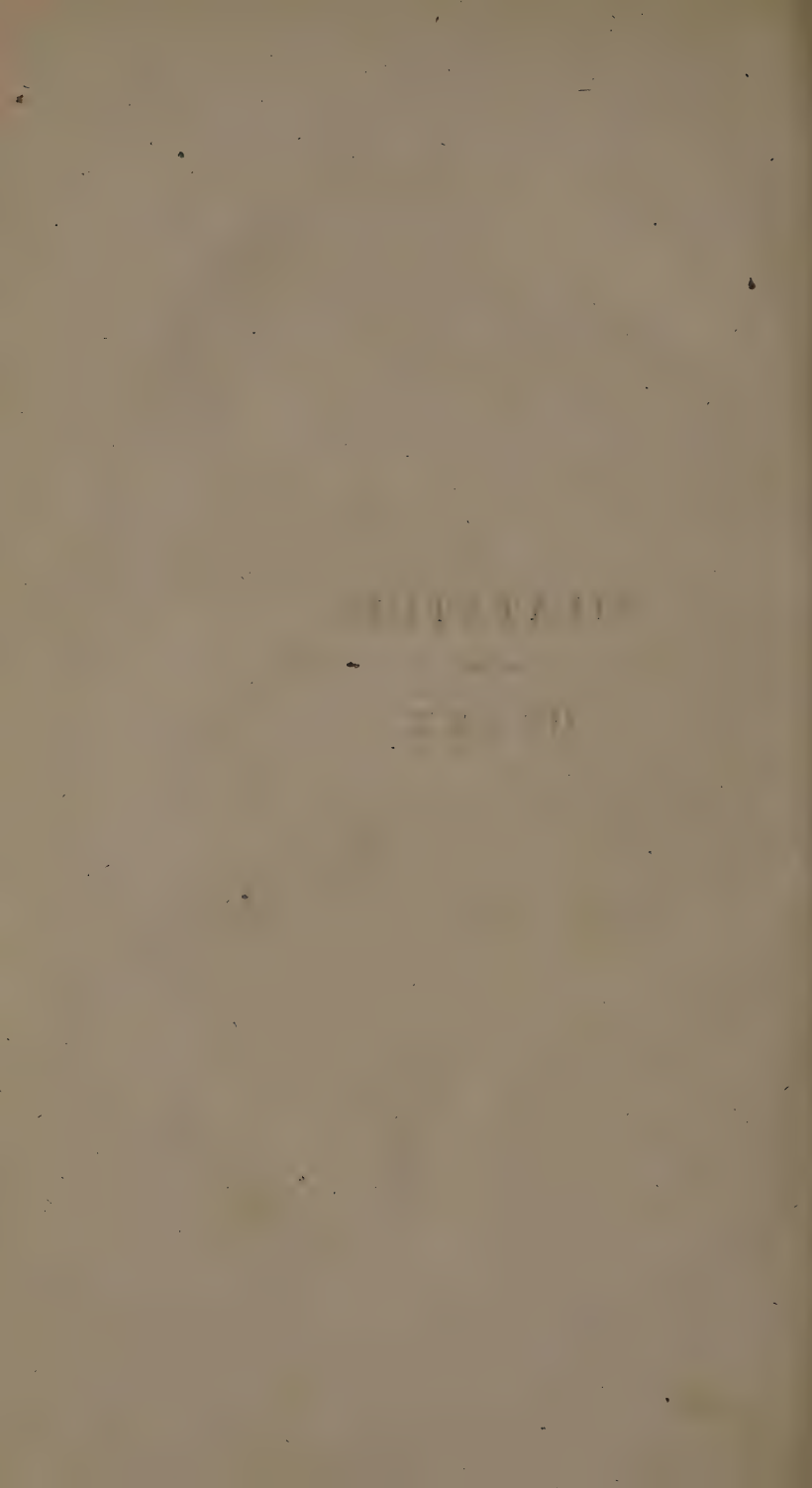
The necessity of such a plan as that I have suggested, may possibly seem doubtful to those who are not accustomed to visit the habitations of the poor; but I am fully convinced, by personal observation, that the ravages of such epidemics as that of 1794-5, cannot be effectually prevented, without
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some exertions of this kind. Should such a design ever be seriously agitated, the expences of the establishment cannot form an objection, for attempts to secure the health and morals of the labouring poor, are certainly consistent with the true spirit of national œconomy.

DILATATION

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HEART.



DILATATION OF THE HEART.

IN the former volume, I gave an account of several cases, in which this affection varied from the common descriptions which occur in medical books. I shall now add a few cases, in confirmation of what I have there advanced.

Sarah Moors, aged twelve, a girl of a very full habit, florid, and healthy in appearance, had been attacked by a violent palpitation of the heart, about a year and half before I saw her, in consequence of a rheumatic fever. The apex of the heart was felt to strike between the sixth and seventh ribs. She complained of orthopnoea, and was often obliged to sit up in bed all night. Her face often swelled; sometimes her feet. She felt a pain and tingling in

in both arms, reaching to the points of her fingers; her pulse was quick; her urine natural. Pain across the breast was sometimes felt. She was directed to take the *infusum digitalis*, which was continued till it produced sickness, but no relief from the palpitation, though a small bleeding was interposed. The *digitalis* was then omitted, and she was put on a course of *spiritus ætheris vitriolici*. From this she derived considerable relief, and though her legs swelled occasionally, grew very tall, and strong. About five months after she came under my care, she had a more than common appearance of health and vigour, though the palpitation was encreasing; but after this effort of the system she began to languish, and was gradually reduced to the lowest degree of weakness. She died at a considerable distance from Manchester, so that I knew the particulars of the last stage only by report. The vitriolic spirit afforded some relief, till within a very short time of her death.

John

John Fletcher, mentioned before, complained of constant pain in the lower part of the abdomen, which sometimes extended upwards, to the region of the heart; the pain was so great, that he commonly lay upon his face. As he had no diarrhoea, no fever, nor any symptom of worms, and the functions of the bowels did not appear to be at all disturbed, I enquired whether he ever felt a palpitation of the heart, and being answered in the affirmative, I thought it proper to examine the breast. I found that the apex of the heart struck between the sixth and seventh ribs; the stroke gave a jarring sensation to the hand, and was visible to the eye. His pulse was feeble and hurried, his tongue clean. He had a dry cough. I ordered him to take thirty drops of tincture of castor thrice a-day, from which he derived considerable benefit for a time. The remainder of this case, I have given under another head.* This boy, at present (March 1795) has advanced very

* On the Effects of Pneumatic Medicine.

little in his growth, and will probably become deformed, but his complexion and countenance are natural.

E. Larkin, a girl aged eleven, had been weak, and rather distorted for four years. About six weeks before I saw her, she was obliged to carry several pailfuls of water on her head, and then, for the first time, felt a palpitation of the heart. I found that the pulsation extended across the thorax, and somewhat upwards: the apex of the heart seemed to be nearly in its natural place; the carotid arteries palpitated strongly. Her pulse was frequent and feeble; her countenance pale. Her left foot and ankle swelled sometimes, and she occasionally complained of pain, just above the elbow of the left arm. She had also constant pain and soreness, at first below the scrobiculus cordis, afterwards in the hypogastric region, and of this she complained much more than of the palpitation. She took the spiritus ætheris vitriolici, and tincture of castor, without relief,

relief, for several months, and then, by my desire, suspended the use of medicine altogether. A month after she had discontinued her medicines, the œdema of the lower extremities disappeared, and the palpitation was rather less. From this time, I heard nothing of her till a year afterwards, when I found her nearly in the same state, certainly no worse; and as far as I could judge, from examining the motion of the heart, the dilatation seemed to have made no progress. I have never met with a case, in which the affected part of the heart was so clearly indicated. There was every reason to believe that the right auricle was dilated.

Samuel Holt, a house-painter, fifty-five years of age, had been subject to palpitations of the heart for three years. The stroke of the apex was felt near the tenth rib; it affected his head strongly, and even gave it an external motion. He often felt palpitations in his neck, and sometimes in his left arm. He could not lie upon his right side, in bed, nor easily on his left, and was sometimes obliged

obliged to turn upon his belly for relief. His face was usually swelled in the morning, and his legs swelled towards night. His belly was sometimes distended, and within the last six weeks, he had been subject to considerable pain in the lower part of it. The pulse was full, and quick; his urine rather scanty.

He had been frequently affected with inflammation in the great toe of the left foot, which was preceded by sickness, and came on about day-break, after his first sleep; this inflammation usually relieved the palpitation, and seemed to be approaching when I first saw him. About a year before, he had suffered a severe pneumonic attack, for which he was blistered.

He had been accustomed to paint dead colours, but was obliged, by the violence of his complaints, to relinquish his employment.

I ordered him to take half a grain of opium, with half a grain of digitalis, every five

five hours, and to drink a pint of the *cerevisia diuretica* daily. Next day he was easier, and the palpitation was diminished: his pulse was still quick, and rather full. Four days after, the toe inflamed; the palpitation was much lessened, and the pulse became considerably softer. The top of the foot was swelled, and there was a distinct gouty inflammation on it. Next day, the swelling and inflammation of the foot were decreased, and the palpitation returned with much violence. I directed the ankle to be blistered, and, as he was costive, opened his bowels with the infusion of senna. A week afterwards, the blister continued to discharge, and was very sore: the palpitation was less, but he complained of a troublesome cough. The palpitation continued to decrease after this period, till he thought himself well enough to be discharged. There never was any remarkable encrease of urine in this case, but I was not quite sure that the remedies were carefully administered, the patient being very capricious, and fond of prescribing for himself.

258 DILATATION OF THE HEART.

J. Blakeley, aged eighteen, complained of constant palpitation of the heart, of three months standing. The apex seemed to strike considerably below the usual place. He was greatly relieved by taking digitalis with opium, in small doses, and drinking a pint of the *cerevisia diuretica* daily.

From these cases, it appears, that dilations of the heart may be retarded in their progress, by different causes, and particularly by the action of diuretics; that in a certain stage of growth, dilatation of the heart is not incompatible with general fullness of the habit, and even, during a certain period, with some degree of vigour; and that local inflammation, whether produced by specific disease, or by the action of rube-facients, possesses a power of alleviating this complaint, even when supported by organic læsions of the heart itself. Hence, perhaps, the utility of issues, in cases of *angina pectoris*.



OF THE
EFFECTS
of
PNEUMATIC MEDICINE.

OF THE EFFECTS OF PNEUMATIC
MEDICINE.

SINCE the publications of Dr. BEDDOES on this subject have appeared, I have been desirous of trying what prospect of relief his method affords, in disorders which do not yield to ordinary remedies. Had I deferred this publication till I had collected a greater number of cases, my information might have been more satisfactory ; but in the moment of enquiry, every additional testimony has its use. In the following cases, the species of air exhibited were procured from the apparatus constructed by Mr. WATT, according to the directions given in his pamphlet.

1. William Whitehead laboured under a confirmed pulmonary consumption, which had been preceded by a spitting of blood.

His cough was very harassing, his respiration difficult, his pulse quick, and his appetite nearly gone. On the first day of his using the hydrogen air, (which was prepared from vitriolic acid and iron filings, previous to the arrival of the apparatus) his pulse, at eleven in the forenoon, was 110. He complained of coldness in the extremities, after inspiring the contents of two bladders, in which the proportion of hydrogen was about a fourth. No alteration in his breathing was perceivable, during half an hour that I staid with him, after the exhibition of the air, but he remarked, that he did not cough again till the evening. He passed a restless night, yet next morning his pulse was only from 60 to 70. The air was now exhibited morning and evening, with evident relief of all his symptoms, and he slept well, with little disturbance from his cough, though the nights were frosty, and the weather was generally foggy. After continuing this plan for a week or two, we were accidentally obliged to suspend the use of the remedy, before the arrival of

Mr. Watt's

Mr. Watt's apparatus. I had dropped all his other medicines on beginning to exhibit the hydrogen, and I now allowed several days to pass without renewing them. During this interval, he felt very great relief. His cough abated; his respiration became perfectly free; and his sleep and appetite returned. The hydrogen procured from the apparatus continued to relieve him, but it became necessary to encrease the proportion to a third. In the course of some weeks, however, the progress of the disease, and the rigour of the season, overpowered the effects of the hydrogen: it ceased to give ease, and was at length discontinued.

2. A lady had been afflicted, upwards of eleven years, with a severe spasmodic asthma. The paroxysms generally continued from twelve to twenty-four, or forty-eight hours, and were sometimes so violent, as to deprive her of respiration and pulse for several seconds. They commonly terminated with sickness and vomiting. During the last two years and a half, they recurred more fre-

R 4 frequently,

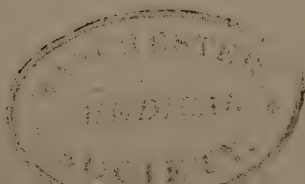
quently, so that she was seldom free from them above four or five days together.

She began to use the hydrogene, in the proportion of a fourth, not long before the commencement of the hard frost, in January 1795. The state of the weather, on account of the sudden vicissitudes, could hardly have been more unfavourable.

She had used a great variety of remedies with little benefit. Opium relieved the spasms, but brought on a degree of nausea and debility hardly supportable. As she had been subject, several years before, to inflammatory complaints in the chest, and there was reason to apprehend that considerable adhesions of the pleura had taken place, I was induced to expect most benefit, in this case, from the hydrogene, or hydrocarbonate,

Great chillness in the limbs succeeded every exhibition of the air; the fits, however, were evidently postponed, for she enjoyed a
more

more considerable interval of ease, than she had experienced for two years and a half, although the weather was very severe. The intense frost, to which she had always been remarkably sensible, at length brought on paroxysms, during which she used hydrogene, hydro-carbonate, and afterwards oxygene, without effect. The oxygene was exhibited, from the analogy of the action of spirituous liquors, which frequently terminate an incipient paroxysm, in this species of asthma. Discouraged by this ill success, the remedy was laid aside for a short time, but on the recurrence of a fresh paroxysm, the hydrogene was again given, in the proportion of a third, or rather more, in a bladder which contained about six quarts. The relief was not immediate, nor suddenly complete; but in the course of a quarter of an hour she was able to walk up stairs to her room, and passed a tolerable night. Another paroxysm was stopped, a few days afterwards, in the same manner. She is still liable to returns of the spasm, but on the whole, has derived more relief from the
pneumatic



pneumatic medicine, than from any other remedy.

3. John Fletcher, aged eleven, had a constant palpitation of the heart, attended with signs of a dilatation of that organ, which have been described in another place. He was relieved at first, by moderate doses of tincture of castor, but in the course of a year that medicine lost its power, though the dilatation did not seem to proceed with much rapidity. Conceiving that his distress might be lessened, by diminishing the stimulating power of the blood, I put him on a course of hydrogene, suspending all other remedies. For some time, he felt no sensible effect; at length, the proportion of hydrogene being encreased, giddiness came on after every dose, but the palpitation was not at all relieved. I then directed the hydrocarbonate air, which affected his head so much, that he dropt down after the last dose. Finding the palpitation not diminished, even after this trial, I thought it prudent to discontinue the pneumatic course,
and

and ordered him half a grain of digitalis every night at bed-time, which afforded temporary relief.

4. I administered a dose of oxygene, in the usual proportion, to a man who had long been an out-patient of the Infirmary, on account of an asthma, which had been formerly relieved by the free use of bark and opium. He felt great relief, immediately on inspiring the air, and said, that if his present feelings could be continued, he should think himself well. His death, which took place suddenly, a few days after, disappointed me in the expectations I had formed, from the commencement of the course.

5. B. Knowles, a middle-aged man, had been affected with a severe cough, during five years; his expectoration was not considerable, but he was greatly emaciated. The adnata of both eyes was of a pearly white: his pulse was small, and generally above an hundred. He took the hydrogene
in

in different proportions, with little or no sensible effect. At length, by repeating the administration of the air three or four times a-day, he complained of much giddiness, but did not feel his cough relieved, nor was his pulse materially altered. The hydro-carbonate was afterwards used, and the event was precisely the same. The course was continued for a month, in the whole, and at the end of that time, he was no better in any respect. It was then discontinued, and he was relieved by the common demulcent remedies, with opium.

6. Anne Banks, twenty-one years of age, had complained for six weeks of severe cough, and copious expectoration. Her pulse was irregular, and much hurried, generally 110, or upwards. She had frequent rigors, night-sweats, her voice became feeble, and her countenance was rather sallow. The menses were irregular. On the 26th of March, I ordered her a dose of hydro-carbonate air, in the proportion of one-twentieth. Her pulse was encreased in frequency

frequency immediately, and she fancied herself rather easier, excepting that considerable giddiness was produced. During the rest of the day, she was much better than usual, and remarked that her voice was stronger than it had been at any time during her illness. I could not learn, however, that her cough had been diminished. She slept better at night, probably in consequence of taking an opiate. She returned next day to the hospital, and took another dose of the air, but not finding so much relief as at first, she did not come again for several days. April 2d, she had a dose of the hydro-carbonate in my presence: the proportion was one-twentieth, in a bladder which could not contain above a quart. Her pulse became more frequent, and was about 120, after she had inspired the air. She perceived no other effect than slight giddiness from the dose; I therefore desired her to take another from the same bladder, which was filled again, with the same proportion of hydro-carbonate. She drew in a very deep inspiration

inspiration from the bladder, and immediately fainted; she revived almost instantly, and only complained of giddiness and confusion in her head. She continued to inspire the contents of one bladder, once a-day, with considerable relief. Her respiration became easier, and she slept better, though the night-sweats still recurred, and her cough was not diminished. Her pulse was still quick. On missing her dose of air one day, she said she had felt a want of it; that her breathing had been less free, and on the succeeding morning her expectoration was streaked with blood. April 7th, she had a severe rigor, after using the hydro-carbonate, her pulse continued quick, and her cough troublesome, but no more blood was expectorated. April 9th, her pulse was as much hurried as ever; her cough was not easier; but she thought her voice rather stronger. On the 10th, I found that she had prevailed on the person who administered the air, to encrease the proportion of hydro-carbonate to a fourth, which produced syncope. She

also

also complained of a head-ach, and a sense of tightness in the head, for several hours after each dose. I immediately ordered the proportion to be reduced to one-sixth, and that it should be exhibited thrice a-day. Her cough was now rather more troublesome, particularly in the night. April 13th, her pulse was frequent, but more irregular; she had passed two very restless nights, and her cough had been very distressing. I ordered the hydro-carbonate air to be omitted, and substituted the hydrogene in its place, in the proportion of one-half. April 14th, she had slept better since taking the hydrogene, her pulse was softer, but still irregular, the head-ach was gone, and her countenance was paler. Her cough was rather more troublesome. April 15, she had a stronger rigor than usual, to-day, succeeded by a severe hot fit; her cough was no better; her pulse was very quick, and her breathing much hurried. She felt no sensible effect from the hydrogene; it was therefore increased to the proportion of two-thirds. The bladder

bladder in which it was concluded contained about six quarts. April 16, she had slept better, and sweated less; her cough was nearly as usual; her pulse still very quick. She was directed to use the air three times a-day, that is, to take twelve quarts of the hydrogen in twenty-four hours. On the 17, however, I found that, through some negligence, she had only used the air once on the preceding day. She had slept tolerably well, but was no better in any other respect. This morning, she was sick, and felt great coldness in her limbs, after inspiring the air, April 20th, she had rested better, and had not sweated for the last three nights. Her cough was nearly as troublesome as ever, but she spit less. She was more enfeebled, complained of want of spirits, and looked much worse. Her pulse was frequent, but languid. On the 21st, she had again slept well, and had not sweated. Her cough was not relieved. Her pulse was very irregular, and small, but she thought herself rather stronger. The
air

air was accidentally omitted, till the next day, when she thought her cough rather worse. The hydrogen was administered with great regularity, twice a-day, till the 26th, when her cough was not relieved; her expectoration was more copious and easier; she slept tolerably well, and had sweated a little during the last three or four nights. Her strength was not encreased; she looked more languid and emaciated, and could in no respect be pronounced better. I therefore directed the exhibition of the gas to be discontinued, but recollecting that Whitehead had been much relieved during the intermission of the hydrogen for a few days, I did not order any medicine in its place. After an interval of three or four days, no change of any kind appearing, I put her on a course of demulcents and opiates.

7. Martha Adams, about thirty years of age, was ill of a peripneumony. Finding the dyspnœa continue on the tenth day, after

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bleeding,

bleeding, blistering, and keeping the bowels very open, I thought it fair to try whether the use of unrespirable air would afford relief, as it might be expected to do, from Dr. Beddoes's theory. Mr. William Henry had the goodness to superintend the administration of the remedy. She inspired the contents of two bladders, each capable of containing a gallon; the hydrogen was mixed in the proportion of one-third. No sensible effect was produced. She took, at the same time, a mixture with opium, antimonial wine, and mucilage of gum arabic. April 20th, she had slept rather better, but her cough and dyspnoea were not at all relieved. I directed the hydrogen to be repeated. She again inspired the contents of the bladders, with the same proportion of hydrogen: after finishing, she felt herself sick, but was not sensible of any alteration in the state of her cough or breathing. As the gas had now produced a noxious effect, without giving relief, I thought it improper to repeat the experiment.

This

This case destroyed the flattering expectations which I had formed, of finding a powerful auxiliary in this species of gas against pneumonic inflammation. Every circumstance was here favourable to its action. The inflammation was abating, when it was exhibited, yet it did not appear to accelerate recovery in the smallest degree.

8. Helen Jones, aged eighteen, had been ill for nine months, of an incessant cough, some expectoration, and night sweats. She laboured under severe dyspnœa, and her face was flushed, and much swelled. In the course of the disease, her legs swelled also. I put her on a course of hydro-carbonate, without any other remedy, and she persevered in it during six weeks. The air was given twice or thrice a-day, and the proportion was increased occasionally, till it affected her head. She never derived one moment's relief from it. Finding her symptoms exasperated, and that her legs began to swell, I omitted the pneumatic course, and gave her digitalis, in conjunction with cream of tartar,

assisted by common demulcents. She died, about ten days after the omission of the gas. I considered this as a lost case from the first, otherwise I should have given up the exhibition of the gas much earlier.

On opening the body, the lungs were found perfectly full of tubercles, which, on being cut open, were seen to contain a caseous matter. There was no mark of suppuration in any part of the lungs. All the other viscera, in the thorax and abdomen, were completely sound.

From these cases, as far as they extend, we cannot draw any conclusion highly in favour of the pneumatic medicine. No benefit was obtained from a long course of it, in a case of tubercular phthisis, where it was ascertained by dissection that suppuration had not taken place. In a very recent case of phthisis, that of Anne Banks, the relief afforded by the hydrogen was very trifling, not equal to what I have produced in similar cases, by common methods of practice.

practice. But what has most disappointed me, is the want of efficacy of this medicine, in a curable disease, a common case of peripneumony, in which the patient recovered by the usual remedies. Knowles, also, (case 5th) was greatly relieved from his complaints, by ordinary medicines, after a long, ineffectual course of hydro-carbonate. I have no reason to suspect want of accuracy in administering the gases here. They were prepared exactly according to Mr. Watt's directions; in the beginning of most of the observations, they were exhibited in my presence, and I have carefully noted every accidental omission. That they were given in doses sufficiently strong, is evident, from the intoxication or delirium which was produced in most of these instances. On the other hand, it must be confessed, that the hydrogen gave much relief to Whitehead, in the advanced state of phthisis, and that some benefit resulted from it, in a chronic asthma (No. 2). As far as my observation goes, therefore, I have only found

the pneumatic medicine palliate, and even that effect has proved but transitory. From the case, No. 3, no conclusion can be drawn.

I am aware, that no positive inference should be drawn, from the small number of cases in which I have employed this method; for I know that practitioners often meet with a series of cases, greatly favourable, or otherwise, to modes of practice, considered alone, which it is necessary to compare with the result of a great number of other cases, indiscriminately taken. I shall, therefore, continue to use the pneumatic medicine, but only in those disorders which prove intractable to common remedies, till I can arrive at certain conclusions respecting it. For I think it wholly inexcusable, to hazard the life of a poor patient, by substituting uncertain remedies, for those which experience justifies us in directing. But I confess that I shall proceed in my trials, with hopes much reduced, and with eagerness greatly abated.

I was

I was induced, by Mr. Cartwright's account of the effects of yeast, in typhus, to order it in one case, in the intervals of administering the bark. The first dose produced such violent sickness, that I did not choose to pursue the experiment farther; and I understand, that the same effect has attended its exhibition by other practitioners.

All hopes from this source are now completely abandoned. I had occasion, some years ago, to observe to the late Dr. Currie of Liverpool, that the Chemical theory of diseases was merely the Humoral Pathology, elevated in the form of vapour. In which he agreed with me.

AN
ESSAY
on the
MEDICAL PROPERTIES
of the
DIGITALIS PURPUREA,
or
FOXGLOVE.



BY
JOHN FERRIAR, M. D.

PHYSICIAN TO THE MANCHESTER INFIRMARY, DISPENSARY,
LUNATIC HOSPITAL, AND ASYLUM.



Nos institutum tenebimus, nullisque unius disciplinae legibus adstricti,
quibus in philosophia necessario pareamus, quid sit in
quaque re maxime probabile
semper requiremus.

Cicer. Tuscul. Disput.
Lib. iv. § 4.

THE

AMERICAN

DOCTOR

AND

PHYSICIAN

OF THE

TO
MAJOR-GENERAL JAMES FERRIER,
LIEUTENANT-COLONEL
OF THE
CORPS OF ROYAL ENGINEERS,
ON THE
ESTABLISHMENT OF IRELAND,
THIS ESSAY
IS DEDICATED
BY
HIS AFFECTIONATE NEPHEW
THE AUTHOR.

THE HISTORY OF THE

REPUBLIC OF IRELAND

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PREFACE.

THE attention of medical practitioners has lately been directed to some properties of Digitalis, not hitherto generally regarded, by the observations of Dr. Fowler, and Dr. Drake, published in the *Contributions to Medical and Physical Knowledge*, and the *Essay on Pulmonary Consumption*, by Dr. Beddoes. As I have been engaged in a series of observations on these properties, for a considerable number of years, it may not be unacceptable to the profession, to be informed of the result of my experience. I have endeavoured to give a faithful view of it, in the following pages.

We

We are indebted to Dr. WITHERING, for our acquaintance with this valuable medicine, which had long been neglected by regular practitioners, and had remained in unskilful hands, more likely to destroy than to cure, with so powerful a substance. This able physician has taught us to use it, with safety and success. Though he treated of it chiefly as a hydragogue, he has indicated its application to the cure of pulmonary consumptions, and has expressed a wish, that the enquiry might be farther pursued. Dr. Darwin proposed to give *Digitalis* in consumption, with the view of promoting the absorption of pus formed in the lungs; but since that period, little has been written on the subject. I mentioned its efficacy in active hæmorrhage, and incipient consumption, as depending on its power of diminishing the frequency of

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of the pulse, in 1792; and several practitioners in this place have been induced to employ it, on this principle, in consequence of my recommendation.

There can be no doubt, that much experience has been acquired, respecting the use of this medicine, by many physicians in different parts of the country, during the same period. It is extremely desirable that their observations should now be made known, that the profession at large may be put in possession of all the cautions requisite in administering it, as well as of the benefit which it may be expected to produce.

I have been careful not to over-estimate the powers of Digitalis, and I hope that I have not been mistaken in repeated observations: at present, I regard it as a
remedy

remedy of the highest class; its exhibition has become as familiar in my practice, as that of peruvian bark, or opium, with which it deserves to be ranked, and I give it with as little dread, (though never without caution) as either of those medicines. If I am not greatly deceived, it will be found eminently serviceable, in a wide range of diseases; and in the present state of our knowledge, the investigation of its effects promises ample scope, for the exercise of skill and ingenuity.

ESSAY.

on the

MEDICAL PROPERTIES

of

DIGITALIS.

PREVIOUS to the publication of some instances of the efficacy of Foxglove, in hæmorrhages and pulmonary consumptions, in 1792, and particularly since that time, my attention has been much turned to the effects of this remedy, on the sanguiferous system.

An extensive employment of the Medicine, during a period of nine years, has enabled me to speak of its properties with some degree of confidence; and I now lay the result of my observations before the

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public,

public, because there is reason to believe, that the Foxglove will become a popular remedy, and that much danger may arise from an ill-timed, and precipitate manner of exhibiting it. It may be useful, also, to give Practitioners in general some idea, of the degree of success which may be expected from it; that their hopes may neither be too strongly excited, by the first fortunate cases which may occur, nor too readily depressed by occasional disappointments.

My early trials of this Medicine in pulmonary complaints, were suggested by the opinions of Dr. Withering, Dr. Darwin, Sir George Baker, and other physicians, on this subject. The effect of Foxglove, in retarding the velocity of the pulse, as a direct sedative,* was too striking to be long over-looked; and when its application, to diminish morbid irritation in the vascular

* The fact is so decisive, that I do not hesitate to employ this term, notwithstanding the jargon, with which the public has of late years been abused, on the subject of sedatives.

system, was once pointed out, the consequences of the idea were easily comprehended. The indication made a deep impression on my mind, which has been strengthened to a conviction of its utility, by a patient and cautious course of observation. It has increased, from the first glimpse of hope which it afforded, in diseases which were once but imperfectly palliated by the continued use of opiates, to the prospect of regulating, without evacuation, the number of arterial pulsations, of directing the movements of the heart itself; and thus acquiring the government of the springs of salutary, and morbid motion.

If any man had expressed an opinion, a few years ago, that we should discover a medicine, capable of reducing the pulse, without danger, from 120 in a minute, to 75 or 80, at the will of the Practitioner, he would have been ridiculed as a visionary. Such, however, under proper management, is the power of Digitalis.

I exhibited Foxglove, at first, chiefly in cases of active hæmorrhage. Its efficacy, in this species of disease, was sufficiently established, by the facts published in the first volume of the Medical Histories and Reflections, to induce me to give it freely, in private practice, as well as at the hospital.

I had an early opportunity of seeing its effects, in a profuse bleeding at the nose. The patient was suddenly attacked by it, in very hot weather, after considerable excess in liquor, and had lost a great quantity of blood, in the course of three days, before I saw him. He had been bled in the arm, and the *lixivium martis* had been applied to the internal nostrils. His pulse had become sharp, but was not strong, and I thought it would be imprudent to use any farther evacuation. I ordered him a grain of *Digitalis*, with half a grain of opium, and as the hæmorrhage became very alarming, both by its quantity, and by the debility which it occasioned, I directed the
dose

dose to be repeated, in the course of two hours, if the bleeding did not abate. I saw him soon after he had taken the second dose; his pulse was then soft, and considerably reduced in frequency; the hæmorrhage had ceased, and did not return afterwards.

I was consulted by a married woman, under 30 years of age, who had been subject, for several years, to almost constant menorrhagia. She was naturally delicate, and the irritation, and debility caused by the discharge brought on a train of hysterical symptoms. I gave her half a grain of Digitalis, with half a grain of opium, every night, at bed-time; and during the day, she took a few drops of laudanum, with tincture of castor, every four hours. Her pulse, which had been irritable and very frequent, became soft, full, and considerably stronger, and in less than a fortnight, she was entirely freed from the discharge of blood, which had so long distressed her.

It is needless to detail a number of similar cases: I shall only observe, that in many other instances of menorrhagia, depending on increased action of the blood-vessels, I have found the *Digitalis* succeed completely, even in the small dose of half a grain nightly.* In some instances, I have found it necessary to repeat that dose, in the course of the day, as often as the patient's stomach would bear it.

Let me observe, once for all, that nothing is less accurately fixed in medicine, than one of its most important objects, the doses of remedies. The proper dose of a medicine, is undoubtedly that quantity which produces the effect required, whatever be its numerical denomination. A full dose of Foxglove is, therefore, merely a relative term. To one patient, half a grain may be a full dose; to another, six or eight grains may be given, not only without incon-

* I could mention cases, in which the discharge stopped by the first dose of Foxglove.

venience, but without producing any sensible effect.

These varieties of sensibility and habit can only be ascertained, by beginning with the lowest dose, and encreasing it with the most scrupulous care. That I might arrive with more certainty at a knowledge of the ordinary doses, I have, since the publication of my first cases, invariably given the powder of the dried leaves, in substance, as the preparation least liable to difference of strength. I have seldom found reason to complain of its want of power, though it may not have always fulfilled the indications, upon which it was prescribed. I have begun the use of the Digitalis with impunity, in so many cases,* in doses of half a grain, that I take no other precaution, than that of joining an equal quantity of opium with it, at first, to lessen the chance of nausea. To shew the necessity of pay-

* I have used it in several hundreds of cases; I cannot exactly determine the number.

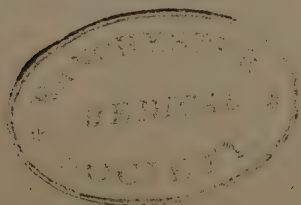
ing close attention to the effects of this Medicine, however, I shall mention a case, which occurred to me in the Infirmary, a few years ago. A young woman was admitted as an in-patient, with an incipient ascites, and swelling of the legs, which had been occasioned by exposure to cold. I ordered her to take half a grain of Foxglove, with half a grain of opium, that evening at bed-time. Next day, I found, to my astonishment, that all the bad symptoms, occasioned by an over-dose of the Medicine, had come on. She had dreadful vomiting, cold sweats, and repeated fainting-fits. It was with the utmost difficulty that life was preserved, during three days, by the most powerful stimulants. When she revived, I found that the dropsical symptoms were completely removed. The gentleman who was at that time House-surgeon to the Infirmary, owned to me, that he suspected a larger quantity of the Medicine had been given, than I had directed. The example, however, may not be useless. I have mentioned

tioned formerly an instance, in which one grain of the Medicine produced considerable sickness, with the effect of removing the disease.* In that case, I believe the quantity had been faithfully administered.

Under these impressions, I have frequently ordered Digitalis, in doses of half a grain, to be given every four, five, or six hours, according to the urgency of the case, in active hæmorrhages, even when I was a stranger to the habits of the patient. I have always succeeded in reducing the pulse, and generally in curing the disease; and I have never seen any material inconvenience produced by this practice; a slight nausea being no unfavourable circumstance to the patient. At the same time, that I vouch for the safety of this method, it must be observed, that great attention is necessary, on the part of the physician and the attendants. The patient's pulse must be examined, from hour to hour, and on its

* Medical Hist. and Reflec. vol. 1. p. 40.

first



first tendency to flag, or on the slightest indications of sickness, the exhibition of the Medicine must be suspended. The practice, in such cases, is extremely critical: if the Foxglove be properly given, we stop the progress of an alarming, perhaps a mortal disease, in a very few hours; but the remedy, if incautiously exhibited, may become as certainly destructive as the disorder.

It is well known to every experienced practitioner, that bleeding with the lancet is very inadequate to the purpose of lessening the velocity of circulation, for any considerable time, unless it be carried to a dangerous excess. The Foxglove furnishes us with the means of regulating the pulse to our wish, and of supporting a given state of velocity, as long as we judge it proper. Though bleeding may still be necessary, in the first instance, therefore, yet I apprehend that we can now dispense with the repetition of it, and may thus relieve the mind
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of the practitioner from a very nice, and perplexing question,

A great difficulty, respecting the theory of the action of Digitalis, has often occurred to me, on this subject. While it lessens the frequency and quickness of arterial contraction, it often encreases, at the same time, the secretion in the kidneys. In the two cases, mentioned in my first volume, and in some others which have occurred subsequently, where all the debilitating effects of Digitalis were exhibited, while the tendency to deliquium was frequent, and the pulse was intermitting, the flow of urine was always increased. In like manner, when great nausea is excited by Digitalis, and the patient's strength is much reduced, the absorbents begin to act with unusual vigour, and take up effused fluids, on which they had previously made no impression. I feel it impossible to explain this phenomenon, at present. The diuretic power of Digitalis, does not appear to me a constant

stant and essential quality of the plant ; the power of reducing the pulse is its true characteristic. According to our general notions of therapeutics, these are contrary effects. To say that the action of the arterial system is retarded, and that of the absorbents stimulated, by the same remedy, is rather stating the fact in different terms, than explaining it.* The secreting vessels of the kidneys are, in general, affected by stimulants, which act upon the whole of the blood-vessels ; but it is conceivable, that a spasmodic state of the vessels secreting urine, or a diseased action in them, may be overcome by a remedy, which lessens the force of the general circulation, as, in

* One of those useful writers, who undertake to account for every thing, has kindly observed on this passage, that the difficulty may be solved, by considering *Digitalis* as a *narcotic stimulant*. I should have thought more highly of the gentleman's ingenuity, if I did not suspect that he had taken a hint from the mock Sir Topas of Shakespeare : " Why it hath bay windows, as transparent as barricadoes, and the clear stones " towards the *South-North* are as lustrous as ebony." The indirect debility of the Brunonians, the quiescent convulsions of Darwin, and several other beautiful inventions of modern Pathologists, are situated, together with the *narcotic stimulants*, in the *South-North* latitude of Reason.

either

either of the cases which I have supposed, the *vis a tergo* (as the physiologists of the last age termed it) must act as an irritating cause, constantly supporting the disease. This reasoning, I am aware, will only apply to certain states of the kidney, and leaves many instances of the general problem unresolved.—It is the more deficient, because cream of tartar, a medicine which appears to stimulate the absorbent system in a peculiar manner, and which operates as a hydragogue, even when it does not prove diuretic, acts commonly as a stimulant, both on the intestines and on the kidneys. Indeed, its diuretic power seems to depend much, on its being given in doses so small, as not to prove cathartic. When it purges, its hydragogue quality is not lessened; in which it differs from most diuretics.

This double effect of Foxglove, however perplexing in theory, is extremely beneficial in practice: when it takes place, it adds, in hæmorrhages, a mode of natural evacuation,

evacuation, sufficiently efficacious to relieve plethora, without directly debilitating the system; and what is of the greatest importance, continually operating while we persist in the exhibition of the remedy.

After establishing the power of Foxglove, in cases of hæmorrhage, arising from increased action, I was encouraged to try it in the first stages of pulmonary consumption.

To prevent any misapprehension, I must observe, that the following remarks apply chiefly to that species of consumption, which is called scrofulous, for want of a better name. Several of my cases, indeed, originated in hæmoptysis, but the symptoms were nearly the same. The reasoning will apply very well to the florid consumption also.

I entered on this series of experiments, with very different feelings. In the former series, the accomplishment of one object, the

the reduction of the velocity of the pulse, constituted the cure of the disease : in the latter, morbid changes are to be counteracted, the nature of which we cannot ascertain, or which, at least, we can only infer, from a circuitous and doubtful train of reasoning ; and some of these changes, once produced, appear to be far beyond the reach of medicine. I need only direct the reader's memory to Dr. Starke's dissections of phthisical bodies, for proof of this observation. My expectations of success, therefore, in this class of diseases, were very moderate. I hoped, by diminishing the velocity of the pulse, to lessen one cause of irritation to the lungs ; and it appeared possible, that the abatement of the impetus of circulation might lead to a suspension of the diseased action, subsisting in them.— I expected also to derive some advantage from the diuretic effect of Digitalis, though that quality cannot be uniformly relied on.

Whenever an effusion takes place, whether
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ther in the bronchia, cellular membrane of the lungs, or the investing pleura, and proves a cause of cough and dyspnœa, we ought certainly to look for relief to this class of remedies. And that such effusions must exist, when the circulation through the lungs is impeded; by alterations of their structure, we are abundantly instructed by dissections.

In this view, I was influenced by the maxim of Baglivi, whom I have found a sure guide, in his practical remarks; *in morbis pectoris semper ducendum esse ad vias urinæ*. Squills, as I have observed elsewhere, probably owe much of their efficacy, in pectoral complaints, to their diuretic power. In the more advanced stages of consumption, I supposed that the hectic fever might be mitigated, in some degree, by the use of Foxglove, and that some of the sufferings, which result from the irritability of phthisical patients, might thus be abated.

One

One of the first cases, in which I tried this method, was that of a young man, who had undergone repeated winter-coughs, and had now, with a severe cough, night-sweats, and much expectoration of a suspicious appearance, acquired the phthisical aspect, and the small rapid pulse, which attends the most prevalent form of consumption, in this part of the kingdom. I began with half a grain at bed-time, and the dose was gradually increased, to two or three grains a-day; his symptoms were completely removed, by this course, even during the winter, and he remained well for a considerable time. I believe, however, that he at length fell a victim to a return of the disease.—Several other cases, of a similar nature, were treated in the same manner, and with at least temporary success. But in most instances I was disappointed. The remedy seemed, for a while, to retard the progress of the disease, but the symptoms, at length, burst out, and seemed only

to proceed with more rapidity, in consequence of the transient delay.

I have seldom found it necessary to exhibit large doses of the *Digitalis*, in this mode of practice. Three or four grains a-day have always depressed the pulse sufficiently for any useful purpose; they have brought it to 76 in a minute; and I have met with few persons, whose stomachs could bear a larger quantity. I have known eight grains a-day given, but they had no sensible effect, either from some fault in the preparation, or from the peculiar constitution of the patient.

I gave this remedy in a case of phthisis, which succeeded a copious hæmoptysis. The disease was confirmed, before I saw the patient. The *Digitalis* quieted the pulse, relieved the cough, and gave the patient feelings of recovery. It was continued for nearly two months, and though he sunk under the disease at last, yet he certainly

certainly suffered little, compared with other consumptive persons, and much less than he had undergone at the commencement of the disease.

It is justly remarked by Dr. Beddoes, that phthisical patients have many distressing symptoms, and that the progress of the disease is not that of a silent and insensible decay, which some writers would lead us to believe.

I have too often witnessed the impatience, and agony of the sufferers, and heard their supplications for relief, which our art affords but imperfectly. I was once prevailed upon, by the intreaties of a young man, and of his friends, to put him under the influence of opium, to relieve the tormenting cough and dyspnœa. The first effects of the full dose were astonishing. His troublesome symptoms vanished, in the course of a few hours; from being unable to move, he found himself so alert, that he

77 A U 2 dressed,

dressed, and went into the street, where he took several turns, and I was blamed for having delayed the use of so powerful a remedy.

It was in vain that I represented the inevitable consequences of suppressing expectoration, which had been very copious before the continued exhibition of opiates; his recovery was fully expected by himself, and every person about him, for two or three days, and the opiate was renewed every four hours, with great alacrity. At length the scene changed; the lungs became gorged with matter, which no efforts could discharge, and he expired in great misery.

If nothing more were gained by the use of *Digitalis*, than the mitigation of suffering, therefore, we might still deem it a valuable part of medical practice in phthisis pulmonalis; but much more extensive benefit may sometimes be derived from it.

A young

A young gentleman, about 17, was exposed to the action of cold, soon after a severe pneumatic attack: he was, in consequence, affected with cough, pain in the side, frothy expectoration, dyspnœa, anasarcaous swellings of both legs, and swelling of the face. His pulse was frequent, generally from 110, to 120, quick, and remarkably sharp. The urine was rather scanty. He had been blistered, and had used mucilaginous medicines and opiates, with little relief. It was the opinion of the gentlemen whom I met, as well as my own, that tubercles were forming in the lungs, and I proposed the exhibition of Digitalis, with the view of suspending the progress of the disease, and, if possible, of enabling the patient to try the effect of change of air, and travelling. The remedy was given in small doses, but, for some time, without any sensible effect. The pulse continued rapid, night-sweats came on, the cough encreased in violence, pains in the hypogastric region were felt, which

appear to me particularly characteristic of phthisis;* and at length the patient was unable to ly down in bed. In this extremity, we determined to push the dose of Digitalis, as far as the stomach would bear it, and it was advanced to two grains and a half, every day. The effect on the pulse now took place: it was reduced to 86, and was preserved at this moderate rate, till the intervention of sickness made it necessary to omit the medicine for a short time, when it increased in velocity again. Upon persevering a little longer, the diuretic action began, and in the course of a short time, all the most urgent symptoms went off. The patient could now sleep soundly in a horizontal posture, the swellings lessened,

* Pains in this situation generally accompany considerable chronic diseases in the heart. Dilatation of the heart is denoted by pain about the region of the bladder, just above the os pubis. The phthisical sympathy occasions violent pain on one side, about the situation of the waistcoat pocket in males. I have sometimes conjectured, that the pain, in affections of the heart, might be propagated along the course of the aorta; internal sensation is so indistinct, that it might be easily referred to a part anteriorly situated. Perhaps in phthisis, the uneasiness may be propagated to the peritoneum, from the inferior process of the diaphragm.

and

and the cough and expectoration were much abated. By continuing the medicine about three months, health was so far restored, that the patient could use exercise without any inconvenience, and the pulse was preserved in a quiet state. Some degree of dyspnœa still remains, and I apprehend a relapse on the return of cold weather, as my wishes for a change of climate have not been complied with; but the case affords a remarkable proof of the power of Digitalis.

About the time that the case which I have mentioned was under treatment, I was consulted for a middle-aged woman, who had every symptom of confirmed consumption. She had a deep, hollow cough, expectoration apparently purulent, night-sweats, flushing of the cheeks, and a very quick pulse: she had been ill for several months, and had been confined to bed some weeks. I advised the gentleman who attended her, to try the Digitalis, in

sufficient doses to affect the pulse, and left her without the expectation of hearing any favourable account of her. Some weeks afterwards, I had an opportunity of enquiring after her, when I learned, to my surprise, that she had recovered so far, as to be able to walk about, and attend to her family.

In a third case of phthisis, which seemed peculiarly proper for the trial of Digitalis, because irritability was the prevalent appearance in the disease, and the cough was long attended with very little expectoration, the pulse was reduced from 120, to 76, with great temporary alleviation of the symptoms; yet the disease ran its fatal course, though the medicine always retained some power of palliating.

The action of Digitalis on the pulse, was carried as far as was prudent in this case; it was not suspended till the pulse was disposed to intermit, and some degree of
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of nausea was excited (the intermission was not the effect of sickness). I was fully satisfied, that the morbid action, in this instance, was not capable of being checked, by the sedative power which the remedy exerted, on the circulating system.

I could add a long list of instances similar to the last, but it would consume the reader's time to no purpose, for the result of my experience may be told in a few words: it is, that the patient's ultimate recovery is not to be confidently expected, even when the pulse is reduced in velocity, and the symptoms are evidently mitigated, for a time, by the action of the medicine.* Many disappointments have taught me not to be elated, by one or two instances of success; and I should deceive the public, if I presented to them only examples of fortunate practice. I believe that Digitalis,

* The reader will find a case, strongly in support of what I have advanced, in the letter with which I have been favoured by Dr. Percival. See the appendix.

properly

properly administered at the beginning of Phthisical affections, may suspend the morbid action of the lungs, by which tubercles are formed; that by its continued exhibition, after hæmoptysis, it may be possible to procure the cicatrization of the ruptured vessels, and thus to prevent the formation of ulcers; and I am even disposed to hope, that its power of soothing irritation may extend so far, as sometimes to heal ulcerations of the lungs, in the advanced stage of consumption. A remedy, from which these expectations may be indulged, is of unspeakable value, and merits the strictest attention of the physician. But, at present, I dare not suppose that many cases of confirmed consumption will be cured by it; for the extensive mass of disease, generally apparent in inspecting the lungs of phthisical subjects,* and the strange formation of new morbid parts discoverable in it, would

* I use the word 'subject' here, according to the language of the dissecting-room.

require

require for its amelioration, an effort of the power which originally created the living body.

The colliquative sweats of consumptive patients are often much relieved, by the use of night-shirts made of spun silk, which less easily imbibe moisture than any other species of covering. This manufacture, which is known by the name of *Silk-sheeting*, was invented by the late Mr. Crowther of Stockport, for his own use, while he was suffering from hectic fever and nocturnal perspirations; and he assured me that he was entirely relieved by it from the sweating. I have employed it, with great comfort to the patients, in consumptive cases, and in chronic rheumatism. In point of warmth, it is intermediate between calico and flannel; and its softness and dryness render it much more pleasant than either, to an irritable invalid.

* This manufacture may be found procured from Mr. Wm. Crowther, of Stockport.

Though

Though I have mentioned the *Digitalis*, as the active remedy employed in those cases to which I have referred, it must be added, that I have found it powerfully assisted, in some instances, by the exhibition of myrrh and the *ferrum vitriolatum*, at the same time. I have even remarked, occasionally, that the cough and dyspnœa were relieved, and the frequency of the pulse was diminished, by the use of this mixture alone, when opium and *Digitalis* had produced but little effect. The dose of the salt of iron was generally five grains, repeated four times a-day.

In this dose, I have never found it to accelerate the pulse, nor to disagree with the stomach. A patient of mine was affected with consumptive symptoms, after a copious discharge of blood from the lungs and stomach, occasioned by intemperance, and accidental violence. I tried the usual methods of relief, and among others, opium with *Digitalis*, but with very little effect. I then

I then directed a mixture, containing myrrh and the ferrum vitriolatum, in the dose mentioned above. He experienced great relief, after taking a few doses, his pulse rose in strength, and became regular, his night-sweats, which had been profuse, were suspended, and his nights were passed more quietly. But these favourable appearances were only temporary. In another case of general scrofula, where the lungs were attacked, and consumptive appearances constituted, for a time, the most formidable part of the disease, the cough, dyspnœa and night-sweats were entirely removed, by this method of treatment.

The advantage derived from this practice, induced me to give steel in substance, in considerable doses, sometimes alone, sometimes in conjunction with peruvian bark, and other tonics; and I went through a complete course of observations on this plan, in cases where I had an opportunity of attending narrowly to phthisical patients.

I found

I found that nothing more could be obtained, than a temporary alleviation of the symptoms; and the subsequent aggravation of the disease was so severe, that I was almost inclined to doubt the propriety of the practice. I believe, however, that the combination of this plan, with the use of *Digitalis*, affords the best means of resisting the scrophulous consumption, provided the *ferrum vitriolatum* be given in sufficient doses; while the *Digitalis* with opium, mucilaginous medicines, and diuretics, may be opposed to the florid consumption.

I have found the conjunction of *Digitalis* with opium remarkably useful, in cases of spasmodic asthma. By keeping the patient constantly under the influence of the medicines, (half a grain of each being given every four or five hours) I have even seen a permanent suspension of the symptoms of this disease. When the stomach will bear the *Digitalis* without difficulty, I believe that very great, and almost immediate relief may

may thus be obtained, even when the Digitalis does not produce any diuretic effect. One patient, for whom I advised this course, had laboured under spasmodic asthma during several years; the symptoms were suspended by a few doses, but when the medicine was discontinued, they immediately returned. After a long continuance of the course, the omission of a single dose still gives occasion to a recurrence of dyspnoea and cough; and the efficacy of the remedy has thus been demonstrated in repeated instances, by the return of the complaint, when the repetition of the Digitalis has been neglected.*

After these remarks, the reader will conclude, that I have exhibited this remedy in coughs of long-standing, which form a considerable part of our objects of practice, at the Dispensary. I was more particularly induced to give it, in this species of disease,

* See the annexed letter from Dr. Percival.

because

because it is probable, that some effusion into the cavity of the chest, frequently accompanies chronic affections of the lungs. Swelling of the face is a very common symptom in such coughs, and their progress is generally closed with anasarca of the lower extremities. The use of *Digitalis*, in such cases, has proved very beneficial; it has given, at least, more relief than any other medicine which I have employed.

The utility of *Digitalis*, in these cases, may be explained in another manner. The lungs may be supposed to acquire a habit of secreting a superfluous quantity of mucus, in consequence of repeated inflammatory attacks, and the stimulus of a harassing cough, continued during a great part of every year. Such a habit may be readily checked, by the sedative power of *Digitalis*.

Many of the cases to which I refer, are of that genus, to which the German practitioners give the title of *Phthisis Mucosa*.

I have

I have had occasion to mention, formerly, the utility of Digitalis in palpitations of the heart. As the direct action of the medicine, is the salutary power required, in these cases, it is strongly indicated, and is indeed eminently serviceable. I have known it to remove the complaint entirely, where it had risen to an alarming degree, in consequence of terror, and intemperance; and even in cases depending on organic læsions of the heart, or great blood-vessels, it has relieved the symptoms, and rendered life not only longer, but more supportable. It is evident, that I mean to except from these observations, the symptomatic palpitations which accompany dyspepsia, or a state of general nervous debility.

Though the diuretic effect of Digitalis be more uncertain than that of some other remedies, its exhibition ought not to be neglected in dropsical cases. Upon some habits it exerts an immediate and powerful action, in encreasing the urine, and as the

probability of deriving this effect from it can be ascertained, after a few doses, the experiment is always worth making. The plan of treatment which I generally prefer, is to give cream of tartar, early in the morning, in purging doses, and to throw in the *Digitalis* with opium, in increasing doses, every evening. But when the bowels are rather too open naturally, or when great debility renders purging hazardous, I give *Digitalis* in half-grain-doses, at intervals of five, six, or eight hours, with the usual precautions. If no beneficial effect be perceivable, in the course of a few days, I exchange the *Digitalis* for some other diuretic; and I am persuaded, that when this remedy, given in such quantities as to alter the pulse, does not speedily act as a hydragogue, or as a diuretic, it is merely loss of time to persevere in its exhibition. Its successful operation is sometimes so quick and salutary, as to astonish the patient and his friends: I have seen all the symptoms of general dropsy, attended with a fluttering,

fluttering, feeble pulse, removed by small doses of Digitalis, in the course of a week; and in one remarkable case, to which I refer, the vigour and steadiness of the pulse encreased, exactly in proportion as the water was withdrawn from the cellular membrane. In that case also, the skin of the penis was extremely distended, and tortuous, a symptom which is generally reckoned mortal, or at least extremely discouraging. There appears to be some peculiarity of structure, in the cellular membrane in this part, which renders it less susceptible of accumulation than that of other parts of the body: for it has been remarked by anatomists, that fat is not deposited under the skin of the penis, in any remarkable quantity, even in very corpulent subjects; and effused fluids do not seem to find admission into it readily. This symptom, therefore, is only alarming, as it indicates an extraordinary disposition in the exhalents to effusion, and great want of action in the absorbent vessels. But I

have much more frequently been disappointed in the operation of this remedy: it has either failed in promoting the flow of urine, or it has not reduced the swellings, when the quantity of urine has been increased.

I have had reason to regret, that the employment of this remedy does not afford the patient any security against the inflammatory, or hæmorrhagic affections of the villous coat of the stomach and intestines, which are so frequently the harbingers of death, in dropsical disorders. The following case, which has just come under my observation, shews this in a striking manner, and deserves to be stated, besides, on account of its connexion with another part of the preceding remarks.

Mr. T. P. a young man, became affected with ascites, in consequence of a long abuse of spirituous liquors. His skin was hot and dry, his pulse very rapid, and rather irregular;

gular; his urine very scanty; his breathing difficult, and his thirst great. The countenance was of a dark purple hue. He took the Foxglove, sometimes with opium alone, sometimes conjoined with Calomel and Dover's powder (a formula, which I shall notice afterwards), and after some short interruption, used half a grain twice a-day, very steadily. He took, besides, small doses of oxymel of squills, spiritus ætheris nitrosi, and tincture of cantharides, in form of drops, twice or thrice a-day. Under this treatment, the enlargement of the abdomen appeared to lessen; it fell in size, from a quarter, to half an inch, daily, before any considerable increase of urine had taken place; but generally recovered its dimensions towards evening. Swellings of the feet and legs soon made their appearance, and the abdomen became more distended, though the patient was then parting with double the quantity of urine that he had formerly made. The distinction between the diuretic, and hydragogue actions was

here very evident. After several fluctuations of the symptoms, during which the use of *Digitalis* was still continued, as the urine came off in larger quantity, he was suddenly seized with a vomiting of blood, and parted with some bloody stools. The vitriolic acid, with laudanum, was given, but with only temporary relief; blood continued to be discharged, in different states of extravasation, till the patient's death, which speedily took place.

When I have been unable to produce any considerable effect, by the exhibition of *Digitalis* alone, I have tried to quicken it, by combination with other diuretics. I have found the junction of Calomel and Dover's powder with it, remarkably efficacious; the formula which I generally use, contains half a grain of *Digitalis*, a grain of Calomel, and eight grains of Dover's powder, made into two pills. I begin with this quantity at bed-time, and repeat it during the day, according to circumstances.

cumstances. It is sometimes not easy to retrace the ideas, which lead us to form particular combinations of medicines; when the *callida junctura*, which is still more desirable in medicine than in works of taste, has been obtained, we forget the imperfect attempts, that preceded our success.

It is obvious, that when much disease of the internal viscera exists, the reduction of the swellings can only be considered as a palliative measure; such it was, in the case which I have just recited: Yet life is often prolonged for a considerable time, by this mode of treatment, and the patient is thus freed from many distressing feelings. In some cases of general dropsy, where the lungs were particularly oppressed by the effused fluid, I have known great temporary benefit derived from small doses of gamboge, dissolved in the spiritus ætheris nitrosi.

A few years ago, I was called to a middle-aged man, who had been affected with symptoms of hydrothorax, during a considerable time, and was then beginning to swell, in the limbs and abdomen. I found him labouring for breath, and his face almost black, from the retention of blood in the vessels of the head. I ordered him to take, without delay, four grains of gamboge, and two drachms of spiritus ætheris nitrosi, in a draught: this produced several stools, and relieved all his uneasiness, in about two hours. The draughts were repeated every day, with different proportions of the gamboge, according to circumstances, and they continued to keep him easy, and even to inspire him with hopes of recovery, upwards of a fortnight. The disease, at length, proved too strong for any remedy. On such emergencies, we cannot wait to ascertain the exact dose of gamboge adapted to the bowels. I have generally found, that adults, who are not previously much exhausted, will bear four or five grains,

grains, without inconvenience. It operates, without producing either nausea or griping; I sometimes add a grain or two of calomel.

From what has been said of the sedative power of Digitalis, it may be expected to prove highly useful in many cases of active inflammation, particularly in pleurisy, and peripneumony, after bleeding has been practised, as far as the patient's strength will permit. We have long wanted a remedy, capable of lowering the pulse, in certain states of these disorders, without increasing evacuation to a dangerous degree. The practice of frequent small bleedings, which relieve the breathing for a few minutes after the vein is opened, often proves an inadequate resource. Hitherto, we have been only able to reduce the pulse, by two methods; either by withdrawing a quantity of the circulating fluids suddenly, or by producing nausea.

In

In hydrocephalus, the *Digitalis* appears adapted to some indication, in every species, and every stage of the disease; as promoting absorption, lessening irritation, and diminishing fever. Calomel, which has been found useful, in the first stage of hydrocephalus internus, may be properly combined with *Digitalis*, in this disease.

Under the circumstances of active inflammation, mentioned above, I conceive that *Digitalis*, given with the necessary cautions, every four or five hours, will supply every deficiency hitherto felt, and will afford the desired relief. Even after inflammatory exsudation shall have taken place, this medicine bids fair to save the patient, by promoting absorption, and lessening the general irritation. On this subject, I do not possess a sufficient number of facts to speak positively. Genuine inflammation appears so seldom, in this part of the country, that I have met with few cases of pneumonia, since this application
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of Digitalis has occurred to me. From the few trials which I have made, however, I should be disposed to place great confidence in it, upon such occasions.

Upon the same principles, I should think that Digitalis may be properly joined with opium, in cases of gangrene, proceeding from excessive irritability. In croup, also, in the inflammatory sore-throat, and other diseases, consisting in active inflammation, its exhibition may be expected to prove useful.

What would be the effect of an injection, composed of the infusion of Digitalis, in virulent gonorrhœa? The solution of opium is sometimes too irritating. I throw out these observations merely as conjectures, to be contradicted, or confirmed by future experience; they appear to be probable results from the ascertained properties of the remedy, but they can only be considered as opening new tracks of enquiry, till they are verified by careful trials. A
striking

striking proof of the fallacy of conjecture,* appears in the failure of Digitalis in maniacal cases; with me, at least, it has not yet succeeded in this apparently promising application.

It would, indeed, be extremely rash, to decide at present on the various indications which may arise for the exhibition of this remedy, from the general principle of suspending increased action. If any medicines have been serviceable, on this principle, in cases of scirrhus or cancer; if cicuta have ever cured such diseases, in any stage, which I confess appears very doubtful, we may resort to Digitalis, with rational hopes of finding it a still more powerful agent, in the state of irritation, or ulceration.†

* Some recent information has induced me to think of trying this medicine again, in mania.

† In cases of internal suppuration, in lumbar abscess, for example, and collections of matter in the bursa mucosa, or cavities of the joints, it would be worthy of enquiry, to ascertain the power of Digitalis. The effect of sea-sickness, in removing such accumulations in the joints, is well known; if some degree of nausea were to be produced, by the exhibition of Digitalis, it might occasion absorption of the effused fluid.

It

It may also be interesting, to ascertain the effects of the external application of Digitalis, in tumors, or ulcers, accompanied with much pain and irritability. It promises to be of service in painful herpetic affections, when employed as a lotion.

These hints may give the reader some idea of the range of enquiry, which I had projected, on the subject of this medicine; the most important and obvious parts of this investigation have occupied a great share of my attention, during several years, and it would evidently require many more for its completion. The facts which have been already ascertained, however, appear to deserve publication, even in this imperfect state; and I have not hesitated to lay open my farther views, which I have not yet been able to verify, because they may facilitate enquiry, to those who may be less familiar with the exhibition of the remedy. Conclusions of so much moment to the welfare of mankind, cannot be formed from
the

the events of a few weeks or months. They must depend on an estimate of the greater number of results, from many cases, under circumstances nearly similar. This is the foundation of experience with every rational man, not only in medicine, but in all reasoning concerning probable evidence.

The mischief of precipitate conclusions is no where more sensibly felt, than in medical practice. A rash induction, may, before its fallacy be properly exposed, occasion the sacrifice of many valuable lives; and a fact inaccurately reported, may prove a source of false reasoning, and of practical error, to several generations.

From the evidence which has been produced, I think we may conclude;

I. That Digitalis is a direct remedy in active hæmorrhage, by its proper action in retarding the velocity of the circulation.

II. That

II. That the diuretic action of Digitalis, though independent of its sedative power, may sometimes take place in conjunction with the latter, and may even co-operate with it, by its effect on the system as an evacuant.

III. That in pulmonary consumptions, arising from hæmoptysis, or tubercles, much relief may be obtained from the use of Digitalis; and that even a cure may now be hoped for, under circumstances which formerly precluded all expectations of recovery.

IV. That in anasarctous affections of the cellular membrane of the lungs, or in cases where effusion, or inflammatory exsudation shall have taken place, Digitalis promises to prove an useful medicine.

V. That upon the principle of diminishing irritability, Digitalis has been very useful, in chronic coughs, in spasmodic asthma,

asthma, and in palpitations of the heart, not depending on simple debility.

VI. That the hydragogue and diuretic powers of *Digitalis*, although not invariably exerted in consequence of its exhibition, are sufficient to render a trial of it proper, in most cases of dropsy; but that it seems to operate most beneficially, when combined with other hydragogues, or sudorifics.

VII. That when *Digitalis* is to be exhibited repeatedly, during the day, and especially if it be thrown in at short intervals, in cases of urgency, the strictest caution is necessary, on the part of the physician and the attendants, to prevent the alarming, and even fatal consequences, which may arise from administering this powerful medicine incautiously.

VIII. That in simple inflammatory diseases, the use of *Digitalis* may perhaps supersede

supersede the necessity of repeated bleeding and purging, and may save the practitioner from much anxiety and embarrassment, which attend the present practice, in such complaints.

If any person were inclined to write a satire on medical evidence, the different testimonies respecting the properties of this single plant would furnish abundant materials. ‘It is a diuretic,’ says one physician; ‘It has no diuretic power,’ says another; ‘It is a stimulant,’ says a third; ‘It is a sedative,’ cries another. ‘It has no properties at all,’ exclaims a fifth. What should the public believe?

I have now been in the habit of using this medicine familiarly, about nineteen years; and whenever I have given it, my attention has been exerted, equally from expectation of its beneficial, and apprehension of its deleterious powers. I may there-

fore speak with confidence of the results which have fallen under my own observation; and if it were necessary, I could strengthen my testimony by the concurrence of many very respectable practitioners, in this town and neighbourhood, who have witnessed the same phænomena with myself, both in cases where we have jointly attended, and in their separate practice. My opinion of the action of Digitalis has been cautiously formed, without any pre-conceived theory, and is a mere induction from a multitude of facts. In what manner opposite conclusions have been drawn, by physicians who have seen much less of practice than myself, I shall not undertake to say, though perhaps I might form some conjecture. I do not venture, like them, to decide on the appearances, in cases which I had never seen.

I. The great question respecting this medicine is, whether it possesses the power of diminishing the strength and velocity of the pulse, which I find some persons have affected

affected to doubt. I can only say, on this subject, that if I am acquainted with any indubitable fact, in medical practice, it is the power of Digitalis, in retarding, and weakening the action of the heart and arteries. But in making this assertion, I do not mean that this effect is produced without exceptions. There are constitutions on which Digitalis does not act in the usual manner; as there are persons whom opium deprives of sleep, and others who are not susceptible of the usual stimulus of mercury.

I trust that it will not be thought presumptuous if I add, that the management of a remedy, which requires great care and delicacy, is not to be immediately acquired. This remark does not imply any assumption of superior skill, but merely of attention, for I have taught several patients to regulate their pulse, by help of Digitalis. One of these, a gentleman who had been struggling for several years with

a phthisical complaint, accompanied with occasional hæmoptysis, called upon me, one day, just after I had been reading the late Dr. Hamilton's Treatise on Digitalis. The patient came to inform me, that he had felt a return of pain in his side, and considerable acceleration of the pulse, and had brought up some blood with his expectoration ; but that he had resorted again to his Foxglove-pills, and in two days had reduced his pulse to 65 strokes in a minute. I could not help stopping him here, to inform him, that different medical writers, (Dr. W. Hamilton, and Dr. Sanders) denied the possibility of such an operation. It would have been truly edifying to some young experimental writers, to have heard the expressions which this philosophical intelligence drew from my patient, who had repeated these trials on himself, till he was perfectly expert in the use of the remedy. But I have had a particular advantage, in conversing frequently, on the effects of Digitalis, with a medical friend,

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the late Mr. Brennand of Oldham, who had begun to take Digitalis, previous to my acquaintance with him, and who persevered in the use of it for six years before his death, to ward off attacks of hæmoptysis, to which he had been subject, and to prevent pulmonary consumption, which he apprehended, and which at length took place. During this long period, he found that he possessed completely the power of regulating the frequency of his pulse; and the progress of a fatal disease was often suspended, and evidently retarded by the power of this medicine. The only disagreeable effect which he experienced, was a listlessness, approaching to drowsiness, but not producing more sleep than natural. I shall only add, that it is no unusual occurrence with me, in visiting a phthisical patient, with an intelligent country surgeon, to agree upon the medium standard at which the pulse shall be kept, by means of this remedy, allowing for its casual action on the stomach.

II. Respecting the diuretic powers of Digitalis, I retain my former opinion; that they are very unequal and precarious; sometimes rapidly, and astonishingly effectual; at other times, inert and absolutely torpid.

III. I have nothing to add to my former observations, on the use of Digitalis in pulmonary consumptions.

IV. In pneumonic inflammation after proper evacuation, and catarrhal fever, I find the Digitalis, in conjunction with camphor and opium, eminently serviceable. Indeed, in cases of this nature, I should feel myself extremely at a loss, without this combination.

V. I have been disappointed in the efficacy which I had hoped to find possessed by Digitalis in maniacal cases. I gave it, in one instance, till the pulse was much reduced in velocity, and rendered soft, yet
the

the patient's frenzy was not at all diminished. This gives reason to suspect, as far as a single case can go, that the sedative effect is produced by Digitalis on the muscular fibre, more than on the nervous system.

The great *desideratum*, in exhibiting this medicine, is to acquire the art of exciting nausea by its means, with safety to the patient. From some cases which I have seen, and from several others of which I have heard, I am persuaded that dropsical swellings may almost always be removed, in consequence of vomiting provoked by Digitalis. But in every instance where this has undesignedly happened, the patient's life has been exposed to such imminent hazard, by the deleterious effects of the medicine, that I have never dared to venture on the experiment.

The¹⁰ nausea sometimes comes on with a single act of vomiting, so suddenly excited, and so quickly past, that it creates little

197A Y 4 attention

attention in the patient or his friends. It returns every day, in this manner, if the medicine be continued; after this, constant, gentle nausea begins, sometimes accompanied with giddiness, and a fluttering, or intermittent pulse. We can venture no farther with safety; for these effects may continue for ten days or a fortnight after the use of the medicine has been suspended; and even an accumulated action, producing deliquium, may occur, after the first symptoms have disappeared. But the absorbents are generally excited to action most strongly, after appearances of this kind have taken place, and pus, as well as effused serum, then disappears; in this manner phthisical patients are sometimes astonishingly recruited, after undergoing a slight nausea from Digitalis.

APPENDIX.

A NOTE

from

Dr. PERCIVAL to Dr. FERRIAR,

on the
PROPERTIES OF DIGITALIS.

August 12th, 1799.

I am much inclined, with my venerable friend Dr. Darwin, to congratulate the faculty, on the acquisition, or rather the revival, of so valuable a remedy, as the Fox-glove. Your experience of its efficacy, both in hydropic and pulmonary disorders, is consonant to mine; but I entirely agree with you, that in the latter cases, it has been extolled too highly, and that danger may arise, from unreserved confidence in its powers, and from the want of due discrimination in applying them. I have now under my care a lady, who labours under phthisis pulmonalis, arising probably from

from tubercles in the lungs. She is harassed with incessant coughing, which is not attended with much expectoration. The matter discharged, however, has a purulent appearance. I directed for her the following pills, in conjunction with the daily use of Griffith's myrrh and chalybeate mixture, now so well known, and so generally approved. R. Pulv. Digital. purp. Opii purif. Flor. Benzoes ā ā gr. j. Mucil. G. Arab. q. s. M. ft. Pil. ij. Capt. j. meridie et alteram hora decubit. omni nocte. This plan was pursued some time, with little or no alteration of the cough, or abatement in the quickness of the pulse. A fuller exhibition, was therefore adopted, according to the following formula; other medicines being discontinued. R. Pulv. Digital. Opii. purif. ā ā gr. ij. Flor. Benzoes gr. iss. Mucil. G. Arab. q. s. M. ft. Pil. iij. Capt. j. 8va. quaque horâ. Two grains of Fox-glove, with the same quantity of opium, were thus administered every twenty-four hours, for the space of two days. At this

this period, I found the pulse feeble, irregular, and tremulous, and reduced from 120, to 56, or 60 strokes in a minute. The *Digitalis* had produced neither nausea, vertigo, nor palpitation of the heart; but as the cough was in no degree mitigated, by its powerful action on the arterial system, I judged it wholly improper to persevere in the exhibition of it.

You desire me to state to you the particulars of a case, which some time ago interested my tenderest feelings, and in which you favoured me, with your kind and judicious assistance. Mrs. P. has long been subject to very severe paroxysms of asthma. In the spring of 1797, I was alarmed with the recurrence of this disease, accompanied with symptoms, which appeared to threaten pulmonary consumption. You encouraged me to make trial of the Fox-glove, which I did, by administering it, under the 1st formula set down above.— In this way she took Fox-glove, opium, and

and flowers of Benzoin, of each one grain, in the course of every day. No inconvenience was experienced from the use of this remedy; though opium, in almost every other combination, was wont to occasion the most distressing oppression of the breast. In a short time the cough became more composed, the dyspnoea ceased, and the pulse lost its febrile quickness, without becoming either too slow, or depressed. Her health was gradually re-established, and has continued tolerably good ever since, with the exception of a few slight interruptions. But the pills are become necessary to her, for if they be omitted two nights successively, the cough never fails to recur with violence. Dr. Darwin's theory of the nocturnal asthmatic paroxysm, appears very applicable to this case; "It is probable," says he, "that the fluid which is perpetually secreted into the cavity of the chest, or into the cellular substance of the lungs, is not duly re-absorbed during the less irritable state of our system in sleep."

I feel

I feel much satisfaction, that you have directed your attention to this interesting subject of enquiry, knowing as I well do, your talents for, and extensive opportunities of observation. It may be worthy of your consideration, whether the action of Foxglove in Hæmoptœe, is not analogous to, though much more efficacious than that of Ipecacuan, administered many years ago, with success, by Dr. Bryan Robinson, of Dublin. Both medicines diminish the action of the heart, and thus afford time for the bleeding vessel to contract, and a coagulum to be formed, at the orifice of it. I am particularly solicitous, that you should point out the *cautions* to be attended to, whenever Digitalis is prescribed in phthisis pulmonalis. Under the earlier stages of this disorder, and especially when the mucous membrane of the lungs is affected, by an acrid defluxion, or inflammatory exudation, this remedy promises to be highly beneficial. But when the cough is dry, and proceeds from tubercles, in
languid

languid habits, I have remarked, that it is not only unavailing but injurious. The fever, in these circumstances, is of a very depressing and debilitating kind; and Fox-glove must be as improper as if administered in typhus, or the angina maligna. I am impatient to see the work of Dr. Beddoes on this subject, as I promise myself much information, from the perusal of it; but it cannot supersede the propriety of offering to the public, the result of your observation and experience.

THO. PERCIVAL.

OBSERVATIONS.

OBSERVATIONS

ON THE USE OF DIGITALIS,

IN LUMBAR ABSCESS,

BY MR. SIMMONS.

P. F. æt 27, was admitted under my care, in the Infirmary, in March 1799, for a collection of matter in the upper part of the left thigh, under the fascia. His disease had been of two years continuance, and having, at first, put on the appearance of the sciatica, it had been treated accordingly. This I learnt only after his death, for he gave me but an indistinct account of his early complaints, and kept from me any mention of the sciatic affection, which would have immediately determined the character of the abscess. From the distinctness of the fluctuation between the bellies of the triceps on the inside, and in the direction of the great trochanter on the outside of the limb,

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(the leading feature of the case having been suppressed,) I was inclined to think it a lumbar abscess; but it wanted the characteristic signs of that complaint, neither pain in the loins having preceded, nor any uneasiness attended the turning of the knee outwards.

Whatever might have been the original seat of the complaint, the indication now to be pursued was clear, and I proceeded to let out the matter, on the principle recommended by Mr. Abernethy.

By the first operation, at least a quart was discharged, and as successive collections afterwards formed, at the interval of a few weeks, it was repeated several times. The quantity of matter evacuated, at each perforation, varied from a quart to nearly three pints, of a thin sanious appearance, though not fetid; and sometimes tinged with blood. The latter circumstance might be occasioned by gentle pressure on the limb,

limb, which was employed to facilitate the discharge of the matter from between the muscles on the inside of the thigh. During this time, he took such internal medicines as were indicated by the symptoms.

As his strength continued to fail, and a natural opening had formed itself, through which the matter was occasionally pressed out, I sent him into the country for the benefit of pure air; but he returned to the hospital again, in a few weeks, more feeble and emaciated than before; and with a considerable collection of matter in the tumour, the natural orifice having latterly closed.

The *Digitalis* now offered itself, as calculated to abate the hectic frequency of his pulse, and as likely to promote the absorption of the accumulated matter. With this intention, it was directed to be taken, in half-grain doses, once, and then twice a-day; at first combined with aromatics, and then with opium.

The first effect of the medicine was, to reduce the frequency of his pulse; and to induce a relish for food, which he had loathed for some time; and also to moderate a very distressing thirst. The sickness then came on, and continued with so much violence as to resist the exhibition of cordials, opiates, and aromatics. The remedy that first afforded even temporary relief was *burnt brandy*; but the patient's situation becoming more and more critical, a blister was applied between the shoulders, which gained a truce with the disorder for some hours; and, to supply the exhausted state of the system thus brought on, glysters of broth, and of wine-whey, were ordered to be injected frequently: notwithstanding the assiduous application of these means, and the continuance of the opium, which had been increased to one grain every four hours, on the second day of the sickness, he sunk under it, and died on the fifth day.

On the second-day of the sickness, he was sensible of a diminution in the size of
the

the swelling; and on the third, he told me that it was entirely gone.

I inspected the body the day after his death, and I examined the abdominal viscera with particular attention, as I do not recollect the account of any dissection published, in which the *Digitalis* had exerted so virulent an effect.

No appearance of disease presented itself on a general view, or on a more particular inquiry; nor did the stomach, on laying open its cavity, manifest any other change from its natural state, than a slight suffusion of redness, irregularly scattered over its internal surface, but by no means approaching to the appearances exhibited, by that organ, on dissection, after acute inflammation.

Though the sickness had been almost incessant for several days, yet the gall-bladder was found distended with bile.

The contents of the chest, however, had undergone a considerable morbid change, for its cavity was completely obliterated, by an addition of the external surface of the lungs to the pleura lining the ribs; and the pericardium had also become everywhere adherent to the substance of the heart; yet he had neither cough, difficulty of breathing, nor palpitation of the heart. These changes must have been very slow in their course, not to have produced irregularity in the action of the heart, nor any disturbance in the office of respiration; but it must be observed, that the lungs were otherwise perfectly sound.

The original disease was discovered to be a caries, in the upper end of the thigh bone.

I did not expect so violent an effect to ensue, from so small a dose of the Digitalis; for, in general, it may be administered in a much larger quantity, by gradually increasing

creasing the dose; and even when the sickness is brought on by an over dose, it rarely continues longer than three days. Its effect on the stomach, however, is extremely various; the smallest dose shall, in one instance, excite alarming symptoms; and, in another, several grains may be taken without producing any sensible effect.

In the year 1786, (for I have used the *Digitalis* many years) I gave the powder of the dried herb to a dropsical patient, in increased doses, till she took seven grains and a half, twice a-day, before any impression could be made on the stomach, or on the circulating system; the sickness then came on, and continued the usual time; but the water was absorbed, and the patient recovered. There could be no doubt of the preparation exhibited in this case being good, because half a grain of it, taken twice a-day, for a few days only, completely emptied another dropsical patient.

I once promoted the absorption of a large collection of matter, in a lumbar abscess, which originated from an internal cause, and pointed in the upper part of the thigh, by the use of calomel in small doses; as soon as the gums became affected, the matter was taken up, and deposited with the urine.

The hectic state of such patients, however, contra-indicates the exhibition of mercury, and directs us to the use of the *Digitalis*; which, from its known sedative effect on the arterial system, and its powerful excitement of the absorbents, promises, not only to calm the increased velocity of the pulse, but to promote the absorption of the matter; and thus, to supersede the making of an external opening. Perhaps absorption might be promoted in this case, by giving it in such small doses, as to preclude, as much as possible, all risk of inducing sickness, which does not appear to be at all necessary, to get rid of the water in dropsy.

The

The lumbar vertebræ are very commonly affected with caries, in this disease; and hence permanent relief will scarcely be expected from any means employed. I have for some time back, inserted a couple of issues opposite to the original seat of the complaint, in conjunction with the usual treatment; and, I think, in some cases, with a manifest suspension of its progress. If issues and the *Digitalis* were early employed, in collections of matter formed under the *psoæ* muscles, a cure might probably be effected, the caries being consequent to the formation of matter. But, when caries of the vertebræ is the primary affection, or has been induced by the pressure of a collection of matter, our expectations of ultimate success will not be very sanguine. Even in the worst case, I shall, in future, be disposed to pursue this method, in preference to any other yet proposed; issues have sometimes wrought astonishing cures in the incurvated spine; and, if they should fail, the *Digitalis* will quiet the
hectical

hectical symptoms better than any other medicine with which we are acquainted. But this case shews the necessity of beginning with very small doses, and of increasing them with great circumspection.

W. SIMMONS.

Since

Since the preceding sheets were printed, I have had an opportunity of ascertaining the efficacy of an infusion of *Digitalis*, applied in form of a lotion, from which I conceive sanguine hopes of its advantages, as an external application. A very painful and ulcerated herpetic affection of the face, which was irritated by the most simple applications, and which would not bear the mildest preparations of lead, was relieved, immediately on the use of a simple infusion of *Digitalis* in water; and in a few days was reduced one half in size. I am happy to find, that no inconvenience has arisen, from continuing to apply it freely. I should suppose, from its action in this case, that *Digitalis* will prove a valuable cosmetic, in those irritable, inflammatory diseases of the face, which were said formerly to depend on acrimony of the fluids.

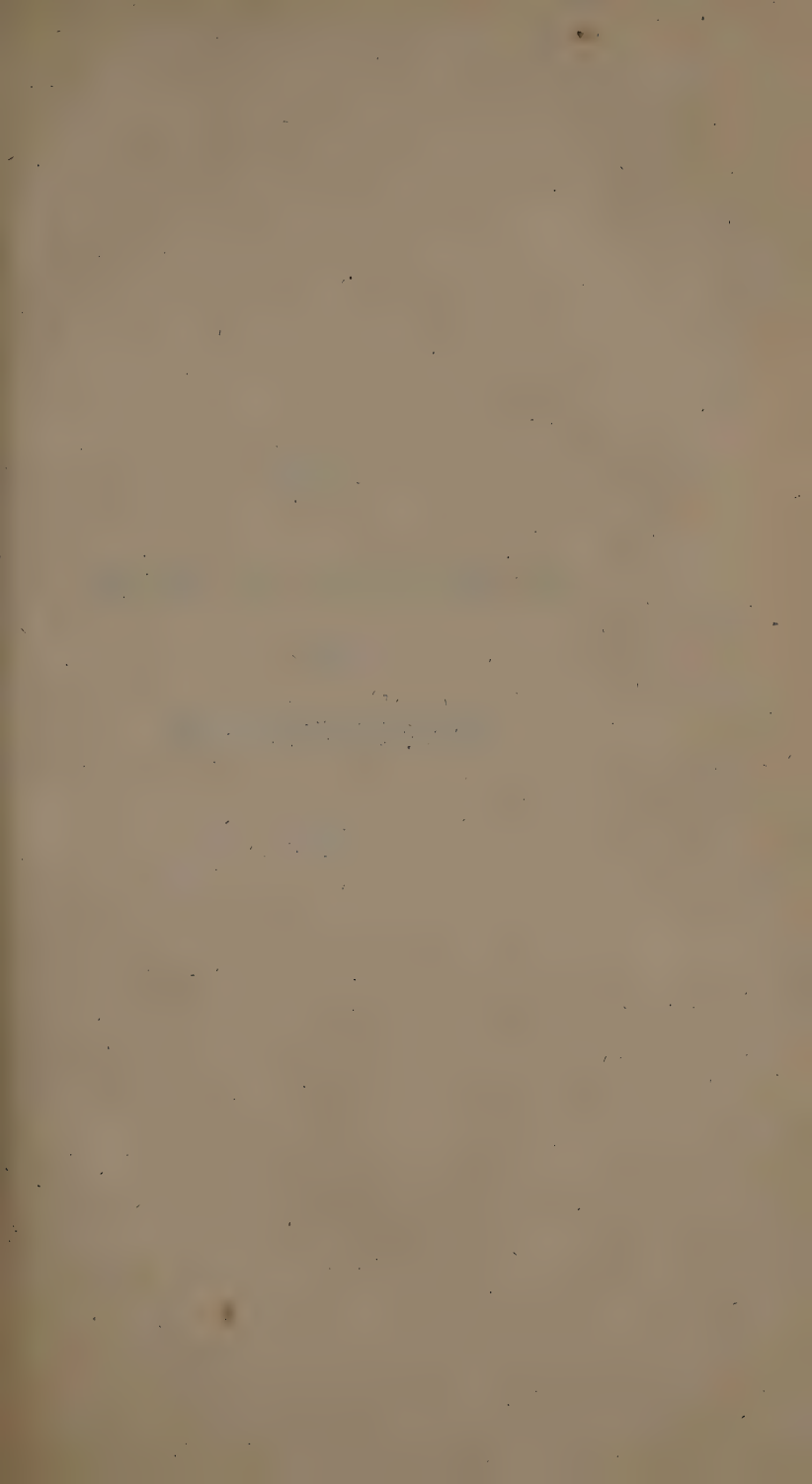
fluids. A more philosophical pathology has now referred the diseased action to the containing vessels; yet to be generally understood, it is necessary to recur to the old, erroneous phraseology.

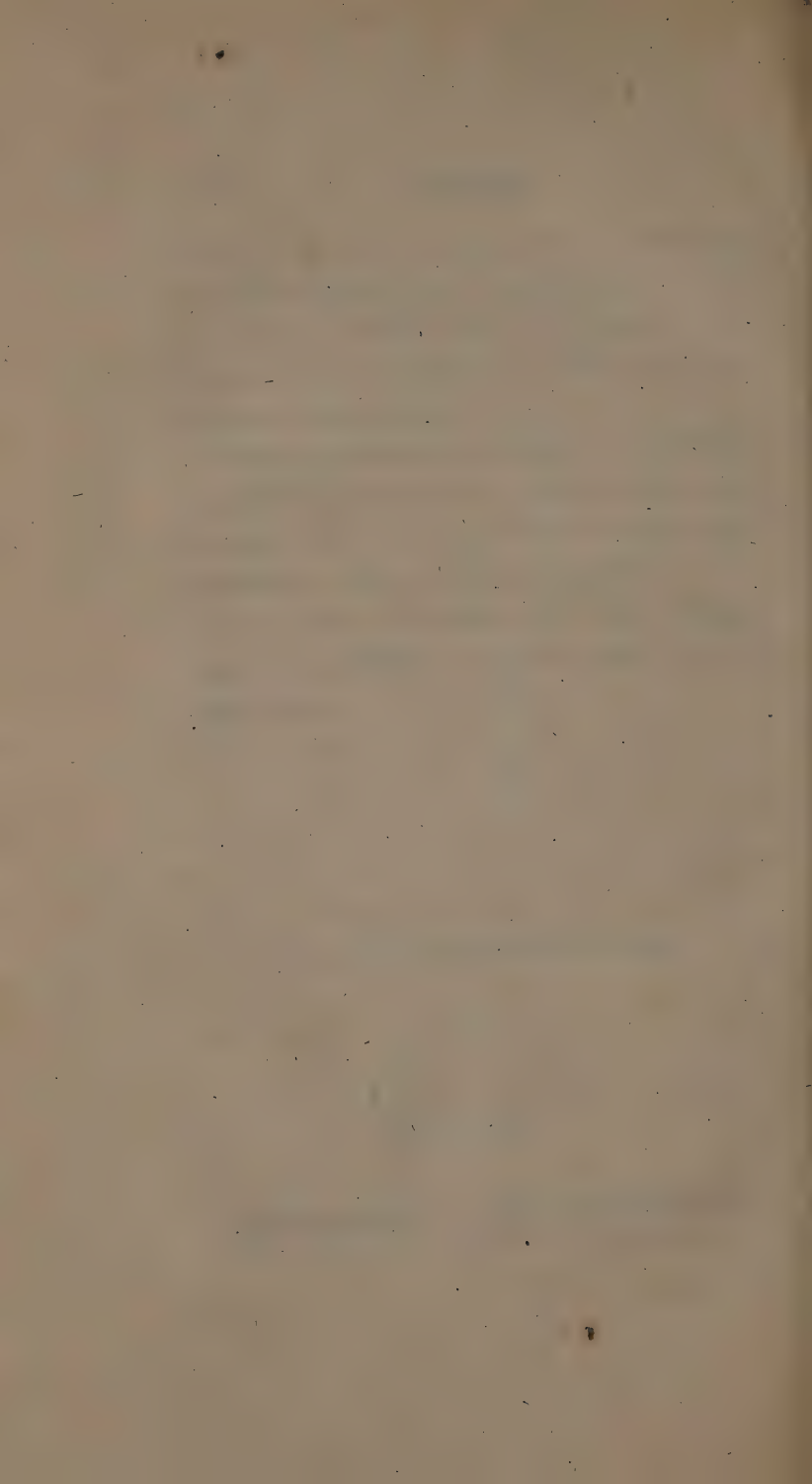
This experiment, to which I was driven by the failure of every method previously known, has encouraged me to hope, that the lotion may at least give relief, in cancerous cases. Probably also, the anthrax may be palliated, if not cured, by this application.

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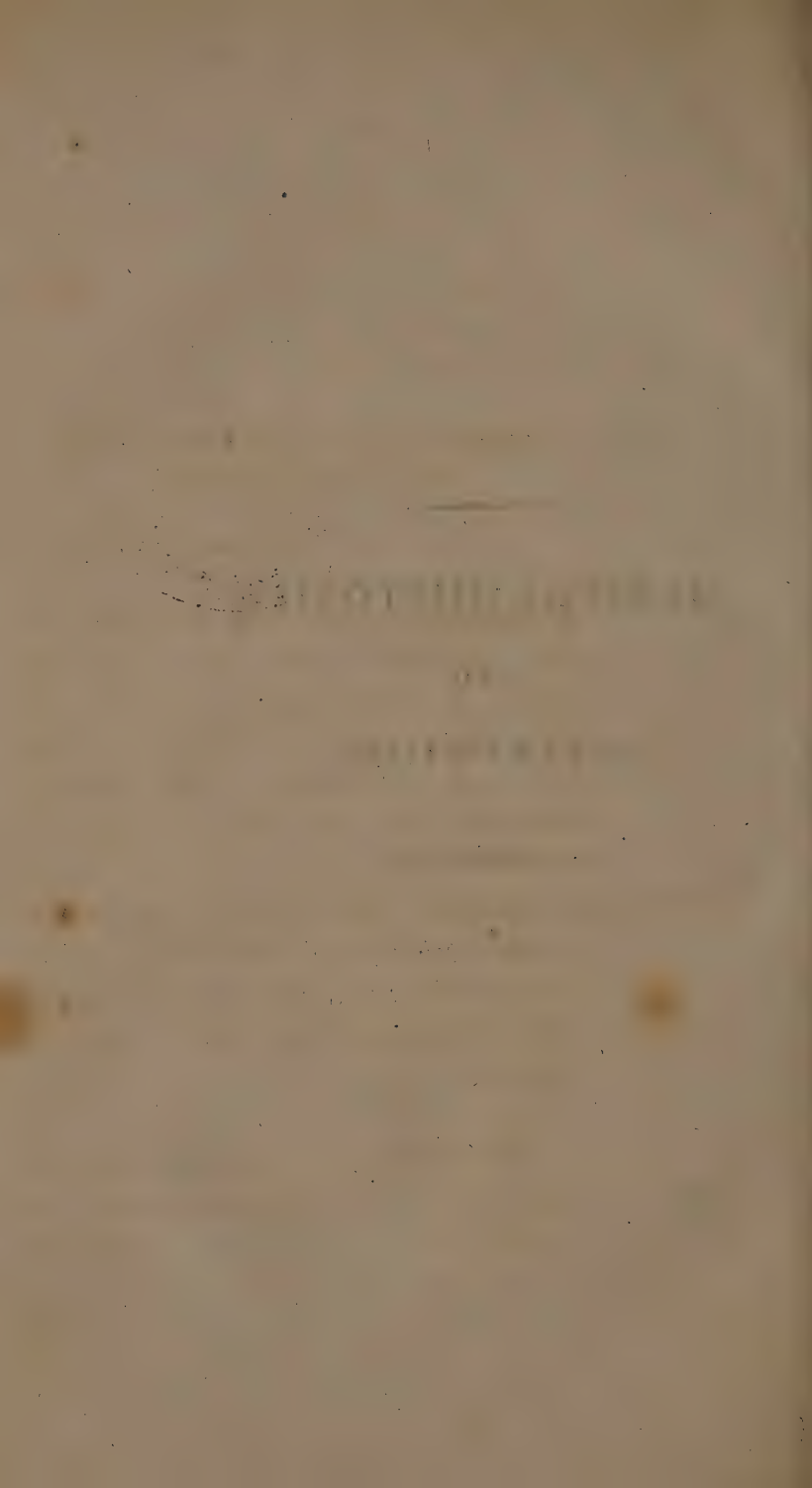


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MEDICAL HISTORIES
AND
REFLECTIONS.

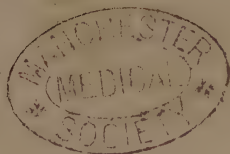


MEDICAL HISTORIES

AND

REFLECTIONS

VOLUME III.



BY

JOHN FERRIAR, M. D.

PHYSICIAN TO THE MANCHESTER INFIRMARY,
AND LUNATIC HOSPITAL.

At nunc succincti quæ sunt bona disce libelli.

Martial. lib. ii. epigram 1.

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1810.

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PREFACE.

THE method pursued in the arrangement of my observations, of which I now offer a continuation to the public, has been so far understood and approved, that it is unnecessary to detain the reader, with any introductory remarks on that subject. But it may not be improper to explain, why some topics are unnoticed, which might, perhaps, be expected to have found a place in this volume.

I have

I have observed, that some of my readers have been disappointed, by the omission of well known facts, under some of my divisions. This arises from the nature of the work. I do not profess to write a systematic, or elementary book, which must comprise, or refer to every thing known respecting its objects. It is my intention to supply some deficiency in the history, or some elucidation of the treatment of particular diseases; and, writing for men engaged in practice, I suppose the general facts to be previously known.

On the subject of *Pneumatic Medicine*, I have been silent respecting
the

PREFACE. ix

the *Gases*, because, after repeated trials, I am unable to convince myself, that they possess any remarkable utility. The noxious effects of some of them are sufficiently apparent; but experience proves, that it is unwarrantable to conclude from their power of destroying life, to their power of curing diseases.

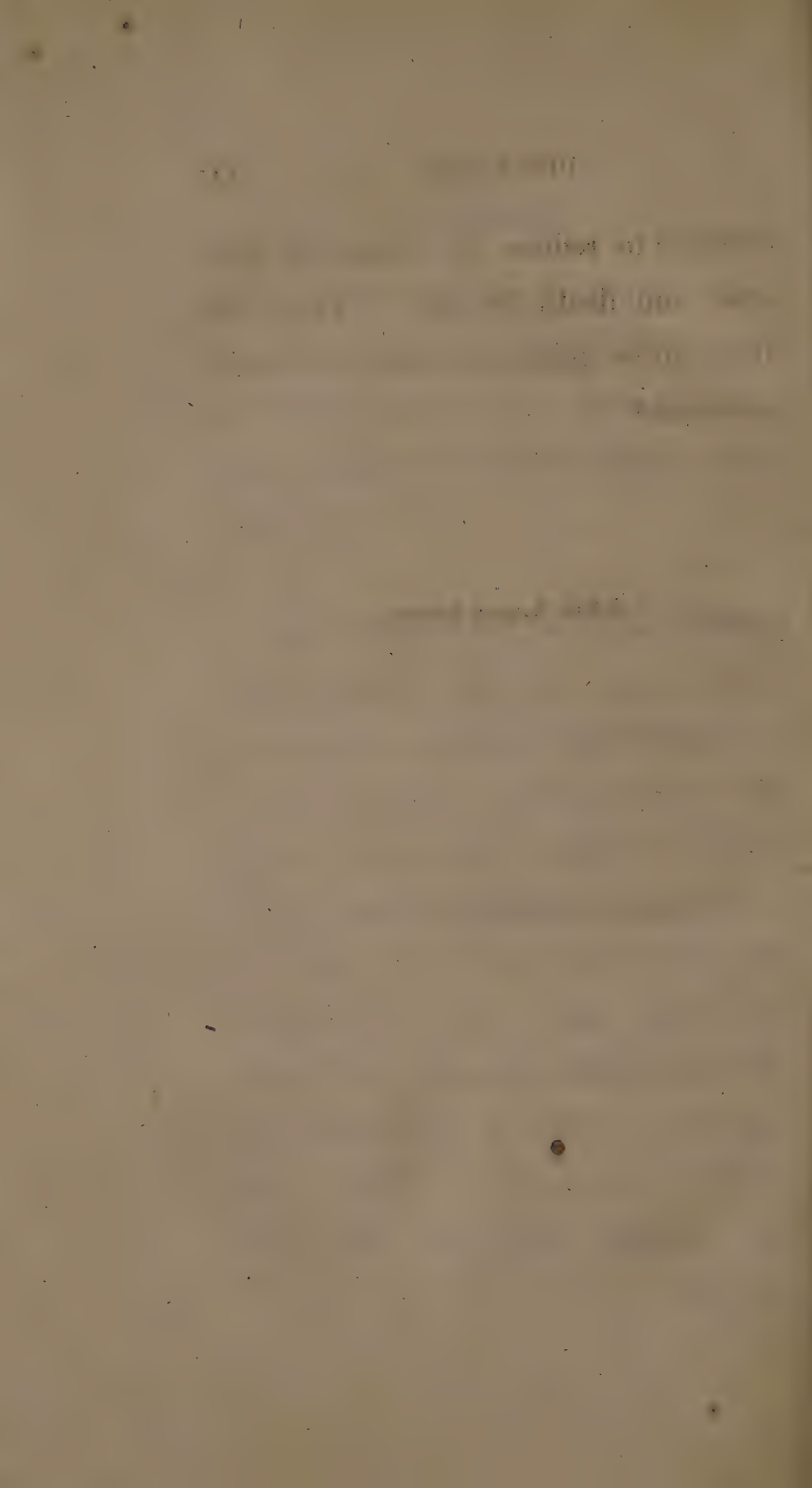
The attention excited on this subject, however, has not been lost, whatever may be the fate of the theories, by which it was first introduced. The treatment of several diseases has been improved, by the free use of the nitric acid, which we owe to the happy talents of
Mr.

Mr. SCOTT. He has completely succeeded, in rousing the Faculty to the employment of a powerful remedy, long, and unaccountably neglected.

The science of medicine would suffer equally, by an illiberal discouragement of speculative opinions, or by too ready an acquiescence in them. One would lead to a contracted, and degrading empiricism; the other, to a confusing, and pernicious versatility. But while we discuss new theories with candour, we should keep in view the memorable words of Hippocrates: that they, who, aiming at brevity, endeavour

deavour to reduce the causes of disease and death to one or two, are liable to be misled in many of their opinions.*

* *Περὶ Αρχαίας Ιατρικῆς.*



RABIES . CANINA.

VOL. III.

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Σαφηνείαν.

MEDICAL HISTORIES

AND

REFLECTIONS.

RABIES CANINA

OF all the monuments of medical superstition, none presents more strongly the characters of former ages, than the history of Rabies Canina. The horror resulting from its origin in the poison instilled by an inferior animal; from the mysterious symptom to which it owes its common appellation of HYDROPHOBIA; and from the dread (whether well or ill founded) of seeing it

communicated by the unhappy patient to his friends and attendants, during his paroxysms, has caused observers to regard this distemper with a trepidation very unfavourable to enquiry. In the early periods of medicine, convulsive disorders of all kinds were considered with equal terror: epilepsy and hysteria were referred to the operation of supernatural powers, and practitioners became better instructed in their nature, only by the accumulation of facts, and the light of dissection.

In treating the first case of Rabies Canina which occurred to me, I felt all the disquietude resulting from the contradictory modes of practice recommended by authors on the subject. I have since met with another case of the same disease, but the patient died before I could see him, and I could only benefit by the opportunity of inspecting the body. The advantage of obtaining a second accurate dissection, in a disorder

so obscure, led me to examine the accounts preserved to us, of appearances after death, and the result of my enquiry has been an attempt to arrange facts, hitherto indiscriminately amassed. I shall first relate particularly my second case of hydrophobia, and then endeavour to conclude, from many similar observations, respecting circumstances hitherto overlooked, in treatises on this singular disease,

A man between forty and fifty years of age, was brought into the Infirmary, October 12th, 1796, from Gravel-lane, Salford, said to be affected with hydrophobia, in consequence of the bite of a mad dog. It was the sixth day of the disease. About six weeks before, he had caressed a strange dog, which came into the court-yard of his master's brewery; the dog bit him in the right thumb, and the wound bled considerably. He apprehended no danger, and took no precautions. On the sixth of October, he

shewed a disinclination to swallow liquids, and in the opinion of the persons who were commonly with him, was generally in a delirious state. He complained of coldness when the door was opened, so that on the first and second day he imagined his disorder to be a sore throat, and even thought that his throat was externally swelled. The circumstance of the bite did not occur to his memory, till the day before his death, when one of the by-standers asked him whether he had ever met with such an accident. He was timorous, startled by all noises, and impressed with the belief that he was harrassed by witches, dogs, and annoyances of different kinds. Two days before death, he underwent several slight convulsive attacks. He never attempted to bite or injure any of the attendants, though it was often difficult to hold him during his frenzy.

The scar of the wound on his thumb was visible. It did not inflame, nor

give him any pain previous to the attack, or during its continuance.

All these particulars I learnt from a very intelligent man, who had attended him, from personal regard, through the whole course of his illness.

Between seven and eight o'clock on the evening of October 12th, a hackney coach was sent to his house, to convey him to the Infirmary. It happened at the time to rain very hard. He hurried into the carriage with great impatience, seeming much irritated by being wetted, and observed, that had it not rained he would not have got into a coach. Upon arriving at the Infirmary gates, he insisted on walking through the garden, though evidently very uneasy under the falling shower. About half an hour after he entered the ward, he was seized with strong convulsions; a large quantity of ropy saliva flowed, for the first time,

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from his mouth, and he died before I arrived at the hospital,

Some hesitation was expressed by his family respecting the opening of the body, and the inspection was delayed, to my great regret. till the next day.

Permission being at length obtained, the body was carefully examined in my presence by Mr. Simmons, on the 13th October; not quite twenty hours after death. The corpse was remarkably pale, excepting that the cheeks were somewhat livid.

On opening the head, we found an effusion of fluid between the pia mater and tunica arachnoides, which distended the former considerably. There was not more water than usual in each of the ventricles. There was a curious appearance of ossification on one of the peduncles of the pineal gland, and the gland itself contained sabulous matter.

On

On examining the thorax, there were some adhesions of the pleura covering the right lobe of the lungs, to that lining the ribs on the same side. The left lobe was so completely filled with blood, as to have acquired considerable weight and solidity.

In the abdomen, the liver was changed in colour, and streaked with white spots. The patient had been, I was told, rather intemperate. The external surface of the stomach was much inflamed, especially on the greater curvature. The œsophagus was completely sound. On opening the stomach, the villous coat was found to be generally inflamed in irregular points, and there was an appearance of abrasion, similar to that remarked in Johnson, my former hydrophobic patient. This inflammation did not extend beyond the villous coat, for on cutting into the muscular coat, it appeared quite sound. The affection did not reach to the pylorus.

The

The near resemblance of the appearances on dissection, in these two cases, led me to enquire whether the dread of water, in cases of Rabies produced by the bite of mad animals, had been accompanied by inflammation of the internal coat of the stomach or œsophagus in other instances: and from this enquiry, I was induced to take a more general view of the subject, and to examine how far the dread of water is essential to constitute the existence of Rabies; as cases are said to have occurred, in which neither this symptom, during life, nor inflammation of the stomach or œsophagus after death, had been observed.

Many cases of rabies are mentioned by authors, in which, upon dissection, the appearance of the internal viscera was found to be altered; but as they express themselves only in the general terms of *aridity*, or *dryness*, it is impossible to form an exact idea of the appear-

ances.

ances.* Lieutaud mentions a case, in which the œsophagus was inflamed:†
 “Instituta sectione cadaveris, cujusdam juvenis, post *morsum a cane rabido hydrophobia* sublatis, inveniebatur œsophagus PHLOGOSI TACTUS. Tracheæ arteriæ facies interior nonnihil etiam rubens, nonnullas inflammationis notas præ se ferebat. Cystis fellea bile nigricante scatēbat inculpato hepate. Cerebrum cum suis involucris, siccus et aridius videbatur quam solet. Vasa demum in qualibet parte sanguine fluidissimo turgentia annotabantur.”‡ [Act. Paris.]

* Lieutaud, *Histor. Anatom. Med.* tom. i. p. 369. *Observ.* 1552, p. 370, *observ.* 1552. (a) P. 515, *observ.* 312. Id. tom. ii. p. 16, *observ.* 457. P. 81, *observ.* 727. Mead.

† Ib. tom. ii, p. 305, *observ.* 86.

‡ Non tantum œsophagus, sed et ventriculus, et intestina inflammata rubescebant in alio cadavere.

Hernand. rer. Mexic. Medic. Thesaur:
quoted by Van Swieten.

There was Inflammation of the œsophagus, in a supposed case of hydrophobia, sent to me by Mr. Hoffman, which Dr. Lettsome has published in the appendix to Dr. Mease's treatise.

Dr. Hoffman

Dr. Hoffman mentions appearances still more nearly approaching to those which occurred in my cases.* “Digna est notatu observatio, quam tradit Cl. Zwingerus, Dec. 4, Ephem. Obs. qui in cadavere rustici hydrophobia secundo mense ob acceptum a rabido cane vulnus, correpti et extincti, in humero et scapula sinistri lateris, ut et in reliquo dorso gangrænæ et sphaceli indicia observavit, in intestinis autem et stomachi tunicis, præcipue circa utraque ejus orificia, *maculas rubicundas*, ceu totidem inflammatiuncularum signa, thoracis cameram undique sanguine suffusam, et ex rubro livescentem, pulmonem inflammatum, interstitia membranosa circuloꝝ asperæ arteriæ cartilagineoꝝ intensissimè rubentia, diaphragma maximè circa costas inflammatum, in corde, vasis majoribus, et pulmonibus sanguinem concretum, et omni sero fluido destitutum invenit.”

* Medicin. Rational. System. De Venenis, &c.

Dr. Hoffman

Dr. Hoffman has omitted a very important circumstance of this dissection: “pulmo pleuræ adherens, concreti sanguinis molem referebat.”*

“Quidam post aliquot menses a morsu canis rabidi, manifesta hydrophobia corripitur, qua, variis incassum adhibitis præsidiis, e medio tollitur.

Inter cadaveris exenterationem, occurrit vesicula fellis bile nigerrima repleta, *pulmones conspiciuntur nigri, & graveolentes.*†

Van Swieten speaks of inflammation of the organs of deglutition, as a common appearance in the dissection of patients who die in this disorder.‡ He also mentions the liquid state of the blood, which has been observed by many

* Lieutaud, Hist. Anat. Med. tom. i. p. 445, obs. 39.

† Morgagni, apud Lieutaud, tom. i. p. 515, obs. 312.

‡ Commentar. tom. iii. p. 561.

other writers, but he does not acquaint us with the date of the respective dissections from the death of the patients, a circumstance which ought always to be mentioned in cases of nicety. He observes what is perhaps more important; the general state of the lungs: "*Pulmones coacervato omni fere cruore incredibiliter plenos;*" and its necessary consequence, polypous concretions in the heart, which are generally found in patients dying of peripneumony.*

In a young man, who died in consequence of the bite of a mad fox, with symptoms of Rabies, the fauces were found very much inflamed; the left lobe of the lungs was black, with the *vesicles*† full of black blood: the surface in some places, which the blackness had not

* Lieutaud, Hist. Anat. Med. tom. i. *Læsiones Pectoris.*

† This is the term used in the Narration. Philosoph. Transact. abridged, tom. v. p. 369.

covered,

covered, appearing blistered, as if raised by cantharides.

It must have been from observations of this kind, that a writer called by MANGET,* *Josephus ab Aromatariis*, supposed the Rabies to be a sort of contagious sore throat.

“ Si on ouvre,” says Sauvages, “ les cadavres de ces infortunés peu de tems après leur mort il s’en exhale une odeur très fétide ; leur ventre est bouffi par les vents ; leur estomac est farci d’une sanie verte ; on remarque dans leur œsophage des taches rouges, tirant sur le noir ; leurs veines sont pleines d’un sang dissous ; leurs viscères sont secs et arides. D’après cela, il n’est pas étonnant que le malade ne boive plus pendant deux ou trois jours.”†

* Bibliothec. Anat. p. 400.

† Nosologie, tom. ii. p. 702.

In a case published by Bartholine,* the liver was found inflamed on the concave side, and adhering to the other viscera; the inner coat of the stomach had become so tender that it could be rubbed off with the fingers. The upper orifice of the stomach, *and the whole of the œsophagus*, were remarkably narrow, and appeared in a state of constriction. The internal surface of the œsophagus does not seem to have been examined.

It appears from these facts, that the dread of water and of cold air, in cases of Rabies, depends on inflammation, and spasmodic affections of the œsophagus and stomach, which sometimes extend to the trachea, the liver, the pericardium, or the heart itself. It also appears, that the lungs are sometimes affected, in a manner hitherto neglected by writers on

* Acta Danica, ann. 1682.

this complaint; that an effusion of blood into their substance takes place, similar to that which proves mortal in certain states of peripneumony. When this occurs to the dissector, it is unnecessary to look for any other cause of death.

But the aversion to water has not been found a constant symptom of Rabies, and it has frequently appeared as a symptom of other disorders. Hence have arisen the great confusion and obscurity of observations, which seem to encrease in proportion as observers have multiplied.

If the single symptom of aversion to liquids, and to cold air, be supposed to characterize Rabies, then several cases, in which patients have died from the bite of mad dogs, not only without having felt this symptom, but even suffering from extreme thirst, cannot be denominated canine madness; which is absurd. And on the contrary, many

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instances of common diseases, curable by common remedies, would be reckoned cases of Rabies, merely* because the patients had felt an aversion to liquids and cold air, at some period of the disorder. Medical writers have chiefly erred in the latter mode.

HILDANUS mentions a case of Rabies, occasioned by the bite of a mad animal,* in which there was restlessness, nausea, anxiety, and tightness in the breast, and pains in the lower belly. Convulsions and delirium followed, and death took place on the sixth day: but there was no hydrophobia.

MEAD says,† “a learned physician has assured me, that in Shropshire, he saw three patients in one year, who, at the ordinary time of about thirty or forty days after the wound, all fell into such nervous disorders as have been described,

* P. 365, observ. 88.

† De Venen.

a fever,

a fever, delirium, palpitation of the heart, spasms, &c. and died on the third day : yet none of them, during this melancholy scene, had any difficulty of swallowing, or shewed any signs of a dread of liquids."

TULPIUS mentions a patient, who upon being attacked with Rabies, in consequence of the bite of a mad dog, complained of intolerable thirst: "*torreri viscera, et præ fervido ardore, tantas intus excitari angustias, ut demorsus senex rejiceret modo stragula sibi imposita, modo vero exsiliret nudus e lecto: exclamans stentorea voce, ardentius sibi esse incendium, et urgentiorem sitim, quam ut posset ab homine tolerari.**"

Sauvages says, it has been frequently observed, that animals seized with Rabies have no dread of water, and that they not only drink, but betake them-

* Observation.

selves to it and swim, without any reluctance.*

In the following instance, there seems to have been no aversion for liquids, in a rabid animal.

A sow, which had been bitten by a mad dog, was shut up and carefully observed. During five days the animal fed as usual; the sixth it was found standing with its head leaning on its food, and in this posture it remained three days. The tenth it was seized with a raging fit of madness: it foamed at the mouth: wandered backwards and forwards in the stable, and from time to time, knocked its head against one of the planks. The fit continued seven hours, after which the creature grew calm and lay down. *Mr. Beudon* seized this instant to employ his remedy. He let down, through the hole into the stable,

* *Nosologie*, tom. ii. p. 700.

a caldron,

a cauldron, in which he had warmed four pots of strong vinegar : after which he stopped the holes in the stable, to prevent all communication with the outer air. In about an hour, his servant, who listened at the door to the motions of the animal, heard a noise which resembled drinking ; and, upon examination, the sow was observed standing and drinking the vinegar with the greatest avidity : upon this, *Mr. Beudon* placed in the trough a quantity of bran moistened with vinegar, of which the day following nothing remained. This plan was followed by the complete recovery of the animal : the dog by which it had been bitten, and a small dog which had sustained the same injury with the sow, were treated in the same manner, and were both cured.*

It is evident, from these facts, that the

* Histoire de la Societ  Royale de Medicine,   Paris.
Pour les ann es 1777, 1778.

term *Hydrophobia* is very improper, and it will soon appear to what confusion its use has given rise. The term βραχυποτία, from a word employed on some occasions by Hippocrates, is more truly descriptive of this symptom,* which consists in difficulty of swallowing, not in any aversion to fluids previous to the experience of this difficulty.

I proceed to shew, that many disorders, totally unconnected with Rabies, are accompanied with the βραχυποτία, and that several modern writers have been led by the term hydrophobia, to mistake an accessory symptom for a specific disease.

“ This disease,” says Dr. Mead, should “ have been called Δυσκατάποσις, a difficulty in swallowing ; rather than Υδροφοβία, a dread of water.

* Sauvages, Nosologie, loc. citat.

“It will serve both to confirm and illustrate this reasoning, to take notice, that there are other distempers besides this, (and all, indeed, of the nervous kind) in which the same frightful symptom is sometimes observed. Authors have remarked it in malignant fevers; and a common melancholy has been seen to end fatally in it. I have known it, in the height of a violent hysteric disorder, to have continued for many hours, till the convulsive motions in the throat were quieted by proper medicines: and I remember a case, in which fits of a palpitation of the heart were attended with so great a degree of it, that it seemed not to differ from the true hydrophobia.” *

It can hardly fail to surprise the reader, that so obvious a cause of difficulty in swallowing, as inflammation of the œsophagus, should have been so much

20 ~~considered~~ Of the mad dog.

disregarded by authors, while they have been eager to collect together the most transient spasmodic complaints, affecting deglutition, under the title of hydrophobia. This mistake, I imagine, has been greatly owing to the want of dissections, in this disease. The opportunities are rare in themselves, and when they actually offer, the operator is sometimes timid, and unwilling to run the risk of infection, by exposing his hands to the contact of the salivary secretion.

It could not otherwise have escaped the notice of practitioners, that the symptoms attending the difficulty of swallowing, in cases of angina, of inflammation in the œsophagus, and of spasmodic affections, or more permanent irritation of the stomach, are readily distinguishable from each other, and cannot be conveniently referred to one general title.

But while the dread of water was supposed to be an essential circumstance of
a disease

a disease beyond the reach of investigation, physicians were more disposed to rank other diseases under its standard, than to place it on its proper level.

Three cases of the accession of this symptom are quoted by Sauvages;* one from the *Journal de Medicine*, April 1766, where a difficulty in swallowing supervened to typhus; another from the *Miscellanea Curiosa*, where it accompanied the variolous sore-throat; and a third from the *Journal Encyclopedique*, where it is important to remark, that it supervened to peripneumony.

* Nosologie, Tom. ii. p. 705.

It would have been idle to have noticed some of these cases, if Sauvages himself had not quoted them under the title of Hydrophobia, and if it were not useful to shew the rage which has prevailed, for multiplying instances of this disorder, without regard to the very elements of pathology. Sauvages felt the inaccuracy which this disposition introduced, and very properly opposed it. But he did not go to the full extent of the question.

In

In reviewing Lieutaud's list of dissections, it will be found that difficulty of swallowing, in different degrees, has attended scirrhus of the stomach.* Boerhaave used to mention an instance, in which the difficulty of drinking, and consequent dread of water, accompanied a fever occasioned by heat and fatigue, joined to the abuse of spirituous liquor.† But the most remarkable cases of this nature are to be found in the Edinburgh Medical Essays,‡ where all the symptoms of *hydrophobia*, as it is usually understood, were produced by unusual irri-

* Tom. i. p. 25, observ. 90, 91. et p. 27, observ. 96.

† Cel. Boerhaavius solebat hac occasione auditoribus suis affirmare, vidisse se lictorem, qui carnificem aliunde accerscere debuerat, ut publica de scelesto homine sumeretur pœna, incidisse in febrim ardentissimam, omnemque potum oblatum cum summo horrore repudiasse, & tertio die periisse: miser ille calidissima tempestate multum corpus moverat, deinde per quatuor horas nudato capite, solis radiis exposito, in scapha sederat, totaque hoc die, solo fere spiritu vini usus fuerat.

‡ Van Swieten Comment. tom. vii. p. 537.

§ Vol. i. p. 222 and 227.

tation in the stomach, without the most distant suspicion of rabid poison. In one of these cases, the disease seems to have arisen from an accumulation of bile; in the other there appeared to be inflammation of the stomach: in this latter case, the patient frequently spouted saliva from his mouth, and had all the horror at the sight of water which occurs in cases of true Rabies, where the difficulty of drinking has been experienced. Both these persons recovered.

Mr. Hoffman, surgeon to the King of Prussia, sent me the following case, in the year 1792. "Give me leave to mention to you a case of hydrophobia vera, without the bite of a mad dog: A man got cold, and had all the symptoms of pleurisy. He was bled, and treated upon the antiphlogistic plan: respiration however remained difficult, and the following day the patient could not take any fluid without falling into convulsions and tetanus. He was bled again,
and

and a blister was applied on the whole neck, but the convulsions continued *with a constant discharge of saliva*, and he now attempted to bite every person who came near him. These symptoms continued twenty-four hours, when the patient died. On dissection, all the vessels of the brain were found very much distended with blood, and in the sinus longitudinalis the blood was of a black colour, and nearly coagulated. The third ventricle of the brain was full of water. The diaphragm was inflamed in one part near the middle, and was throughout of a red colour. The liver had a gangrenous spot; the stomach was small and contracted; the intestines were much inflated with air; and in several parts inflamed; the upper part of the œsophagus was also a little inflamed. I think it is very clear, in this case, that the hydrophobia was entirely a symptom of inflammation produced by cold. The case is related by Mr. Thedon of Berlin."

The

The difficulty of swallowing liquids is also a leading symptom in the Cynanche Pharyngea, a disease which rarely occurs, but which resembles the Rabies Canina in a striking degree. I have seen two well-marked cases of this complaint, and Mr. J. Killer of Stockport informed me, during our visit to one of these patients, that he had met with several instances of it, in the course of his practice. The pain is directly behind the place of the thyroid gland; the difficulty of swallowing, especially regarding liquids, is agonizing, and the inquietude, terror and tendency to convulsions are much the same as in Rabies. In one of these cases, suppuration took place; the abscess burst externally, on the right side of the larynx, and the patient recovered, after both Mr. J. Killer and myself had nearly despaired of his life. But my other patient expired, after the most violent sufferings, which excited strong convulsions. From the situation of the inflamed parts, topical applications are impracticable, and the
general

general means of removing inflammation can alone be employed.

But this symptom does not always arise from local irritation: Dr. Percival has justly remarked, in his letter to Dr. Haygarth, that the difficulty of drinking is sometimes produced by the power of imagination alone. I met with an instance of this kind lately, in which it was very difficult to prevent a person from rendering himself completely hydrophobic. Himself and his wife had been bitten by a dog which they supposed to be mad. The woman thought herself well; but the man, a meagre hypochondriacal subject, fancied that he had uneasiness in his throat, and that he could hardly swallow any thing. When he first applied to me, a medical friend, who was present, asked him whether he had any sensation of heat at the pit of the stomach. He answered in the negative, doubtfully; but, next day I found him in bed, complaining of
heat

heat at the pit of the stomach, difficulty of swallowing, tremors, and confusion in the head. He continued to persuade himself he was ill of Rabies, and confined himself to bed, expecting death, for nearly a fortnight. At last, I remarked to him, that persons who were attacked by Rabies never survived more than six days: this drew him out of bed, and he began to walk about. By a little indulgence of his fears, this might have been converted into a *very clear case of hydrophobia*, and the patient would probably have died.

The application of the term *hydrophobia* to an accessory symptom, supervening to such a variety of diseases, evidently tends only to mislead, by directing the attention of practitioners to supposed analogies, which have no other foundation than the abuse of a word. To be correct, we must preserve the distinction between Rabies, and diseases which are essentially different from it
in

in their usual appearance, and which only acquire an adventitious resemblance to it under uncommon circumstances. Several cases have been described, of late years, under the title of *spontaneous hydrophobia*. I think it very evident, from the view I have exhibited, that no such disease ever exists.* If those cases be analysed, they will be found to belong to the class of hysterical, febrile, mental, or spasmodic disorders, and by ranking them under their proper titles, we shall at once clear this subject from a great and accumulating mass of error. By considering the matter in this point of view, we are also enabled to explain the contradictory reports, hitherto so perplexing, on the effects of remedies

* This position has been maintained with great solidity to a certain extent, by Dr. Mease, in his accurate Treatise on Hydrophobia, p. 6 to 11.

Dr. John Hunter had advanced a similar opinion, by way of conjecture, in his Observations on Canine Madness. Transactions Medical and Chirurgical, p. 302; 303.

in

in Rabies. It is easy to perceive, that evacuant and antispasmodic remedies would remove a difficulty in swallowing, occasioned by inflammation or spasm in the stomach or œsophagus; that bark and wine would cure it in cases of typhus, or of low mania; and that opium and the cold bath would be successful, when it accompanied tetanus.

When these false cases are set aside, perhaps we gain something respecting the *ratio symptomatum*, and the practice in Rabies. The difficulty of swallowing, in this disease, is probably almost always attended with inflammation of the stomach or œsophagus: we cannot, therefore, hesitate to bleed, and to apply rubefacients of the most active kind to the skin, as near the seat of inflammation as possible, whenever this symptom appears in a clearly-marked case of Rabies. It is of some advantage, that we can nearly ascertain the duration of the disease, for, if the practitioner be con-

VOL. III. D. sulted

sulted early, he can determine with precision, whether a succession of blisters, or of stimulants quicker in their operation, be better adapted to the remaining portion of time. But the mode of applying these remedies may also be varied, by attention to the view of the disease next to be mentioned.

It has been remarked in many of the dissections, that the lungs have been loaded with blood, to such a degree, that some part of them has appeared almost a solid mass, exactly resembling the phenomena which occur, when blood has been effused into the substance of the lungs in pneumonic inflammation. The only question upon this point is, whether this happens so frequently as to constitute an essential part of the disease. I am inclined to suspect that it does. It is true, that in my first patient, Johnson, there was no particular disease visible in the lungs, which surprised me more, as he had suffered repeated attacks of pain

in the breast and sides, and of cough, previous to the accession of the Rabies. But the appearance of effusion in my second patient was so striking, and the phænomenon is mentioned so frequently, without reference to theory, by authors, that it is allowable to direct the attention of practitioners to this circumstance.

This state of the lungs is obviously a sufficient cause of death, and when it is detected, affords a solution of our doubts on that head. If it be supposed, that congestion of the lungs takes place in the first instance, the affection of the brain, and the appearances of effusion or congestion discovered in it, receive also a full explanation. And that this supposition is not improbable, appears from the great anxiety and oppression at the breast, of which the sick so generally complain, which Dr. J. Hunter* supposes to depend on an affection of the heart,

* Transactions Medical and Chirurgical, p. 307.

but which the review of dissections inclines me to refer to the lungs. Symptoms of compression of the brain are sufficiently remarkable, in the ordinary course of the disease, such as the delirium, and the convulsions, which are frequently of the epileptic type; but, in some cases, the appearances have been still more decisive. In a patient of Dr. Mead's,* a paralytic affection of the right arm supervened, and the patient complained of mist before his eyes. A patient of Dr. Howman's,† who was seized with Rabies in consequence of a recent bite, was affected, at the very commencement of the disease, with palsy of the right arm, and intermission of the pulse at the wrist of that arm. The difficulty of swallowing did not take place till the third night; and the paralytic complaint continued to encrease till death.

* Philosophical Transactions abridged, vol. ii. p. 369.

† Philosophical Transactions abridged, vol v. p. 369.

If future dissections should prove, that congestion in the lungs generally appears in those who die of Rabies, I confess that I should be disposed to consider this disease as dependent on the obstruction of circulation in that important organ. Accumulation of blood in the head, and compression of the brain, must be the consequence of such an obstruction, rapidly formed. The quick, panting respiration, anxiety and sudden debility, may be referred to the same cause. In fact, we find a similar degree of tremor attendant on the croup, which consists in inflammation of the trachea, and destroys by suffocation. That degree of inflammation in the stomach or œsophagus, which produces the difficulty of swallowing liquids, may not only arise from sympathy, but the symptom itself may occur in consequence of the state of the lungs alone. This will appear from the following case, given by Bonetus.

“ Quidam voracissimus enterocæles molestias declinaturus, castrationi se submit, feliciter peractæ. Omnia ritè se habebant, cum post tres septimanas *difficultate deglutiendi et difficili respiratione* prehenditur. Tertia die lingua erat carbone nigrior, urgebat^a deglutiendi et respirandi difficultas. Nil in hac anginae specie, nec intus nec extra apparebat, si linguæ nigrorem exceperis.

“ Mortui aperto corpore, salva reperta est trachea arteria, et omnis phlegmonis expers. Thymus intumuerat, et atro sanguine scatens tracheam premebat. Pulmones se præbent inflammati, et creberrimis maculis nigris conspersi cum gangrænæ signis evidentibus.” *

It will appear, on reference to Lieutaud, under the title *Læsiones Pectoris*, how frequently inflammation of the

* Lieutaud, Hist. Anat. Med. tom. i. p. 454. observ. 69.

higher part of the abdominal viscera, accompanies pneumonic inflammation.

To all these considerations we must add, the suddenness with which death takes place, and the remarkable fluidity of the blood, so commonly observed in dissections; circumstances which cannot be satisfactorily explained, without attending to the state of the lungs, which I suppose to exist.

These conclusions, it must be owned, are uncertain, because the facts from which they are drawn are incomplete. I offer them only as conjectures, which may give a new direction to farther enquiries, on a subject equally important and obscure.

In the mean time, it cannot be uninteresting to consider, what mode of practice this view of the disease would determine us to adopt. Repeated blistering would certainly be adviseable, if

the period of the disease should admit this remedy ; and the application should be made to the head, as well as to the chest and spine. Blood should be drawn from the jugular veins, and perhaps the head and lungs would be best relieved by the repetition of bleedings. The state of the pulse, and the apparent degree of debility, should not deter the practitioner from using this remedy, on my supposition. Those symptoms may be considered as the necessary consequence of impeded circulation in the lungs. Dr. Nugent's case of Rabies which was cured by large and repeated general bleedings, was evidently an hysterical affection. In the present state of knowledge, little will be attributed to the musk which he exhibited. Great attention should undoubtedly be paid to the state of the pulse, while the blood flows from the vein, especially after the first bleeding. The same cautions apply here, which have been given by practical writers, on the subject of repeated

peated bleeding in peripneumony. In fact, there is no disease which is accompanied by more striking marks of debility, at its first appearance, than peripneumony. If, however, the practitioner should be alarmed at the idea of frequent general bleeding, leeches may be applied to the temples. With the view of relieving the lungs from congestion, by stimulating the exhalents, and of extinguishing the existing disease, by producing another less dangerous, the success said to have attended the free use of mercury is perfectly reconcileable. I should join opium, in pretty large doses, with this process. Calomel with opium may be given internally, while the mercurial friction is applied to the limbs: I believe that the mouth will be sooner affected in this manner; and considering the short duration of the disease, it is of the highest importance to excite a ptyalism early.

So greatly would this hypothesis alter
my

my views of the indications of cure, from opinions which I have formerly expressed, that it would induce me to prohibit entirely the use of the cold bath, and of bark, during the existence of the symptoms.

Respecting the use of oil, I should be more uncertain. Dr. Shadwell's case appears to favour it; yet there was something very unusual in that case, both in the mode of attack, which resembled phrenzy more than Rabies,* and in the duration of the disease; for eleven days elapsed from the first symptoms of illness, and nine from the phrenitic attack, before the difficulty of swallowing, and dread of cold air left the patient. If oil were given, I should not allow it to supersede the mercurial course.

* Memoirs of the Medical Society of London, vol. iii. p. 454.

As it is absolutely necessary to choose among the contradictory methods of treatment, recommended in Rabies, I have thus ventured to state the plan upon which I shall proceed, if any other cases occur to me; but with a deep conviction, that the grounds of preference are not yet sufficiently ascertained. This is a subject, concerning which the mind of the medical philosopher cannot remain at rest. It is allowable to hope, that careful dissections, and accurate discrimination of symptoms, will at some future period afford the power of removing this hitherto intractable disease.

I shall add to these reflections, the following cases, sent me by Mr. Cock, surgeon, of Ashton-under-Lyne. There is something dubious in the first case, though it bears strong marks of Rabies; but I think the second, that of Parker, is perfectly well-marked, especially by the suddenness of his death, on the fifth

or

or sixth day, after having exhibited the characteristic appearances of the disease. As there was no reason to suspect the existence of canine madness, in the town or neighbourhood, excepting in the animal which bit these persons, the statement affords full proof of the sporadic origin of the disease in dogs, contrary to the opinion proposed by Mr. Meynell, in the *Zoonomia*, and inconsiderately adopted by one or two medical men. That opinion might, indeed, be refuted by the now established effect of fever-wards, which are capable of arresting the progress of an epidemic, by separating the sick, but which do not prevent the sporadic generation of infectious fever in individual cases.

Mr. Cock's narrative was accurately drawn up, from notes which he took during the period of his attendance.

Dear

Ashton-under-Lyne, July 24, 1807.

Dear Sir,

According to your request I will give you as correct a statement of the cases of Hodson and others as I am able.

1805, March 22. I saw Robert Hodson, aged eighteen years, who said he began to have a severe pain in his right arm and to have the head-ach yesterday, previous to which time he had been healthy. He now complained of alternate hot and cold fits, pain in his stomach, head-ach, sickness, and a severe pain in his right arm and shoulder. His pulse was one hundred in a minute, and bowels open. He took Pulv. Ipec. gr. xv. and afterwards two table spoonfuls of a sudorific mixture every four hours.

23. His sickness was relieved, but the pain in his arm and shoulder was increased, he had a depression and pain
at

at the pit of the stomach; in other respects was as yesterday.

24. At six o'clock in the morning I found him in a furious delirium, a large quantity of viscid saliva was, with convulsive motions, and apparent disgust, discharged from his mouth. He had a great determination of blood to the head. During his struggles I perceived he had an erection of the penis. He was thirsty, grasped the vessel containing the liquid, he drank with great agitation and convulsive motions, and when the liquid touched the fauces, the muscles of the neck were violently convulsed and seemed to be swelled out almost as far as his chin. He had no dread of liquids, nor did he ever refuse drinking what was offered to him, when he was sensible enough to understand what was meant by the offer. He fancied the breath of every person who approached him had a bad smell, and desired them to keep at a distance. I now took his mother and

and sister aside, and asked them if ever he had been bitten by a dog, they answered no : but in a few minutes the sister said, he had been bitten in the right hand about nine weeks before by a whelp, and that it bit several other persons at the same time. The dog was the same night shut up, and the morning after it was found dead. It seems this dog which was nine weeks old, and of the bull dog kind, had on the day these people were bitten, entered into a painter's shop and overturned upon itself some black paint, containing oil of turpentine, and it was on attempting to wipe off the paint that they were bitten. The animal had however attempted to bite almost every thing it came near, two or three days before it died, and had refused its food. I now examined Hodson's hand and arm, but could discover no inflammation nor cicatrix. I opened a vein in each arm, but could get only a few drops of blood. The application of twelve leeches to his temples

ples was ordered, but only three were applied, owing to the fury of his delirium, and to his attempting to bite the attendants. A glister was now administered, which contained Tinct. Opii ʒj. Sp. Ammon. C. ʒij. and he took a draught containing Sp. Ammon. Comp. gts. L. Tinct. Opii gts. xL. soon after which he became quiet, and the flow of saliva almost ceased : but complained of a pain in his nose, forehead and stomach. He was now put into a tub of warm water, up to the chin, which did not in the least discompose him, and when he got to bed again, he said he had no pain any where, but still he had a great difficulty in swallowing liquids, which he never offered to do but the muscles of his neck were convulsed ; his pulse was much lower than it was two hours before, he attributed his present comfortable state to his having had the resolution to blow his nose, which he said he “ was determined to do,” and he fancied that a boy had forcibly thrust a stick up each nostril.

About

About twelve o'clock he had his draught repeated. About one P. M. his delirium returned, but not so violently as before, and he again began with great agitation to discharge saliva, which increased in quantity as long as he lived; his neck was now constantly swelled, and between four and five o'clock he was exhausted and died. It may be of importance to observe, that this poor creature never suspected that the bite of the dog brought on his disorder.

1805, April 7. I was called to see Thomas Parker, aged sixty-two years, who had been bitten by the same dog, and at the same time as Hodson had. He said he had been ill three or four days, had been thirsty, and his head had ached all that time, but had followed his work till yesterday. He now complained of pain in his forehead, was very hot, tremulous, could not well bear to be exposed to the fresh air, and could not swallow liquids but with great difficulty.

VOL. III. E culty.

culty. Three drachms of laudanum mixed with the yolk of an egg, was rubbed into his breast and the pit of his stomach; in about three hours afterwards, four drachms of laudanum with the yolk of an egg, was used in the same way; and he was directed to take a large dose of Aq. Ammon. Pur. and Tinct. Opii every hour.

8. He had passed the night chiefly in a standing posture, said he could not bear to lie down, and had got no sleep. I found him eating some pottage, of which he swallowed but little, and that with difficulty, and threw the greatest part of it out of his mouth again. He appeared better than he was yesterday, he had no pain, his pulse was low, and his body of a natural heat, but was tremulous, had a starting of the tendons at the wrist, and had a peculiar suspicious and timid appearance. He was ordered to continue the use of the Aq. Ammon. Pur. and T. Opii. About four o'clock

P. M.

P. M. as he was standing on the chamber floor, talking with his daughter, he fell down and died without a struggle.

This patient was not capable of giving a minute account of his feelings, owing to the stupified state of his senses, contracted by a long habit of hard drinking.

Of six persons bit by the above mentioned dog, two are dead, one left the country soon after, and three had the parts which were wounded burnt out by the lunar caustic, the day after Hodson died, and have hitherto enjoyed good health.

I cannot hear that this dog was ever bitten by any rabid animal. After it was found dead, several dogs in the neighbourhood were destroyed on suspicion of their being mad, but there was no proof of their being so.

I am your's, sincerely,

SAMUEL COCK.

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ACCOUNT
of
THE ESTABLISHMENT
of
FEVER-WARDS
in
Manchester.

— I have always thought it a greater happiness to discover a certain method of curing, even the slightest disease, than to accumulate the largest fortune; and whoever compasses the former, I esteem [him] not only happier, but wiser and better too.

SYDENHAM.

ACCOUNT OF THE ESTABLISHMENT OF FEVER-WARDS IN MANCHESTER.

IN the two preceding volumes, I thought it incumbent on me to lay before the public, a view of the misery and havock, produced by the prevalence of infectious fevers, among the poor in manufacturing towns. A more agreeable task is now before me; it is, to explain the measures which have been adopted, in consequence of my representations, for remedying those evils, and the success attending the new institution, which has almost exceeded my warmest expectations.

Towards the close of the year 1795, an alarming infectious fever broke out at Ashton-under-lyne, which was sup-

posed to have originated in the cotton-works of that place. Upwards of three hundred persons were attacked by it, in less than three months, and though the mortality was not great, a degree of terror was excited almost equal to that which the appearance of the plague would have inspired. I have been told that travellers were even afraid to pass through the town. The disease raged principally among the poor, and did not extend so much as was apprehended, into the houses of the more opulent. A committee was formed for the relief of the sufferers, and a subscription was raised for supplying them with medical attendance, medicines, and wine. An attempt was also made, to provide a house for the reception of fever-patients, but from the general prejudices of the sick, it was impossible to procure their removal from their own houses.

Mr. Ogden, surgeon at Ashton, enquired with great accuracy, into the origin

origin of this epidemic, and it appeared very clearly, that the whole mischief had arisen from the admission of a young woman from Manchester, into one of the rooms of the cotton-works, who had come from a house infected with fever, in this town. Mr. Ogden informed me, that he observed an eruption, which made its appearance on the fourth or fifth day of the fever, but without relieving the symptoms, and indeed without any evident effect on the course of the disease. I had seen something of the same kind about that time, in Manchester, but not so distinctly. The observation, may be worth recording, however, as I can place the firmest reliance on Mr. Ogden's report, and as he drew it from a great number of cases.

The attention and uneasiness thus excited, on the subject of fever, appeared to some gentlemen, who had interested themselves in my preceding details of the state of the poor, to offer a favourable occasion for forming a Board of Health,

Health, which I had proposed in the second volume of this work. Mr. Bayley of Hope, Dr. Percival, Mr. Meadowcroft, and several other gentlemen, requested me to draw up a plan for this institution, and appointed a meeting to receive the paper, and to begin a subscription for carrying the measures which should be recommended into execution.

A copy of this paper follows, which was read at a very numerous and very respectable meeting of the friends of the poor; among whom were several proprietors of large cotton-mills, who were desirous to use every means for preserving the health of the persons employed by them.

“To the gentlemen meeting at the Bridgewater-arms.

“Gentlemen,

“At the request of some of your number, who originally proposed this meeting, I submit to your consideration

consideration a few remarks towards the formation of a board, or committee, for superintending the health of the manufacturing poor, in Manchester and Salford. A principal object of this committee, must be that of diminishing the frequency of the epidemic fever, which has so often alarmed us in this place, which is now very prevalent in some parts of the town, and has spread itself to a very unusual extent in some of the neighbouring towns. The circumstances which produce and propagate this disease, seem to require more immediately the interference of a public body, and these once remedied, the general health of the poor must be greatly improved.

Having already published my sentiments pretty fully on this subject, I shall remark, without entering into any reasoning, that the principal sources of fever among our poor, are lodging-houses, cellars, cotton-mills, and the incautious intercourse of the poor with each other, in places infected.

1. Respecting lodging-houses, I have observed elsewhere, that the most desirable means of prevention would be to subject them to licences, which would bring them under the controul of the magistrate. At present, as the town is much less crowded than it was in 1792, the mischief arising from these houses is less; and until the committee can acquire the proper powers, it would perhaps be sufficient, to be at the expence of white-washing such as shall be reported to be infected and dirty, or when they are found to be over-crowded, to prevail on some of the lodgers to remove, which may be readily done.

2. The number of damp and very ill-ventilated cellars, inhabited in many parts of the town, is a more extensive and permanent evil. It may be necessary to explain to gentlemen who have not visited such places, that they each consist of two rooms under-ground; the front apartment of which, used as a kitchen,

kitchen, though frequently noxious by its dampness and closeness, is greatly preferable to the back-room : the latter has only one small window, which, though on a level with the outer ground, is near the roof of the cellar ; it is often patched with boards or paper, and, in its best state, is so much covered with mud, as to admit very little either of air or light. In this cell, the beds of the whole family, sometimes consisting of seven or eight, are placed. The floor of this room is often unpaved : the beds are fixed on the damp earth. But the floor, even when paved, is always damp. In such places, where a candle is required even at noon day, to examine a patient, I have seen the sick without bedsteads, lying on rags ; they can seldom afford straw. This deplorable state of misery becomes frequently the origin, and certainly supports in a great degree the progress, of infectious fevers, I have been able, in many instances, to trace the infection from cellar to cellar, and to
say

say where it might have been stopped, by prudent management on the part of the infected family. But it is likewise very difficult to eradicate the fever, when it seizes a family thus situated. It generally attacks them all in succession, and the convalescents, from their confinement in the midst of infection, have frequent relapses, attended with encreasing danger, so that the disease continues in the same spot, for several months together. The recovery even of those who do not relapse, is also tedious and imperfect, beyond the conception of any who have not experienced cases of this nature. The want of proper nurses must be added, as none of the least evils attending this unfortunate class of people. I have no hesitation in asserting, that many lives are annually lost, from this cause alone. It is extremely difficult, at present, to procure a nurse of good character, upon any terms, and it is often necessary to employ persons, on whom little dependance can be placed,

that

that the sick may not be entirely destitute of assistance.

Great advantages would therefore be derived, from removing the infected, and in some instances, perhaps, the whole family, from such dreadful habitations as I have described, into a clean, airy house, which should be provided by the committee, till their own cellars could be white-washed, and sweetened by slaking quicklime on the floors. It is a question for the decision of the committee, whether they would prefer renting a house, or building a fever-ward for this purpose. I confess, that I should incline to the latter, for these reasons.

1. In the erection of a fever-ward, situation, air, and convenience would be better consulted: in renting a house, some of these very important objects might be unavoidably superseded.

2. Upon such a permanent establishment,

ment, one or more women of decent character might be induced to undertake the office of nurses.

3. By thus bringing the worst, and most neglected cases under one roof, the chance of spreading infection would be diminished, while attention to the patients on the part of the nurses would be better secured, than if the patients were dispersed in different houses, as, in reality, it would be very difficult to obtain a complete house, upon any rent, for such a purpose.

To explain this observation, I must beg leave to repeat a circumstance, which I have stated in my last volume of Medical Essays. Previous to the building of our Dispensary, when a patient happened to be seized with an infectious fever in the Infirmary, the disease was apt to spread to an alarming degree, so as to require a general dismissal of the patients. But since a few rooms have been added

added to the Dispensary, for the purpose of secluding persons thus attacked, from the rest of the patients, though bad fevers have been accidentally introduced, yet by removing the patients, on the first attack, into the fever-ward, the disease has always been prevented from extending, without the necessity of dismissing a single patient. In like manner, I conceive, that by building a fever-ward in each of the Infirmary districts, and removing into them the worst cases from the worst houses, the progress of infection would be materially checked, and a great quantity of disease and mortality would annually be prevented. This plan would also give additional success, to the labours of the Infirmary physicians. It would add the chances arising from cleanliness, free ventilation, and careful nursing, to the efficacy of medicines.

4. In a separate building, the access of unnecessary visitors would be better
 VOL III. F prevented.

prevented. It may give the committee a clearer idea of the extent of this danger, to mention, that an elderly woman, just recovering from the fever, informed me, that she had fifteen children, all settled in the town, and all of whom had undergone the fever within these two months.

In a building of this nature, it would be highly useful to have woollen dresses for convalescents, or persons belonging to removed families, that the clothes of the infected may be purified by stoving, or scouring. Shoe-baths would also be required for medical purposes, as well as for cleanliness.

It would be greatly to the advantage of the manufacturing poor, if the custom of wearing flannel next the skin were introduced among them. It would counteract, in many instances, the bad effects of cold and dampness, and would prevent many fevers and rheumatic affections.

tions. More frequent changes of apparel, which conduce to health as well as to luxury, might perhaps be procured to the poor, by encouraging the establishment of clothes-clubs, which some of them have begun to form among themselves.

In manufacturing towns, the attention of the poor is diverted from cleanliness, by the value of their time. To wash the linen of a large family appears hard labour, to a woman who can earn a subsistence by different employment. The mother of a family is, therefore, easily induced to let her children become very dirty, by the temptation of gaining money in a manufactory. Perhaps the distribution of pecuniary rewards to mothers, whose children shall be sent clean to the different manufactories, would produce a good effect.

What I now propose to the committee, can only be regarded as a measure palli-

ative of the most urgent evils, for the best method of furnishing the poor with healthy habitations, which should effectually stifle the germs of infection, would be that of erecting small houses, at the public expence, on the plan of barracks, or cazerns, to be let at small rents, or gratuitously, according to the circumstances of the persons applying.

At present, perhaps, it would be most expedient for the committee, to try the effect of a single fever-ward, in some quarter of the town where infection more frequently prevails. In a town like this, such buildings can never become entirely useless, even if the plans of the committee should extend to the length, at which I have hinted. The want of proper sewers, in several of the streets, and the offal of slaughter-houses, left to putrefy before the doors in several places, are nuisances which deserve the serious attention of the committee.

3. On the subject of the propagation of infection in cotton-mills, it may be necessary to observe, that although it has been supposed, that fever may be imported in the cotton; and though this opinion does not seem improbable in itself, yet no direct proof of fevers originating from this source has ever been obtained. On the appearance of the present epidemic at Ashton, an alarm of this kind was spread, because the fever broke out in the picker's room of a manufactory there; but I am informed, from very respectable authority, that the infection was actually carried thither from Manchester, by a girl, who went to be employed as a picker at Ashton. I apprehended that the mischief arising from some cotton-mills, as they are at present managed, results from,

I. The custom of working all night;

II. Negligence in washing the floors and frames;

F 3 III. Negligence

III. Negligence respecting the personal cleanliness of the work-people, and especially of the children ;

IV. Imprudence in permitting convalescents, or persons coming from infected houses, to resume their work, with their clothes saturated with infection ;

V. Want of proper ventilation, particularly during the night-labour, when the air of the room is rendered additionally impure by the candles.

With regard to the three first articles, I am uncertain how far the committee could with propriety interfere. If the proprietors and overseers of manufactories could be interested in the views of the committee, very advantageous regulations might be formed.

The custom of working all night totally frustrates every attempt to ventilate the

the mills thoroughly ; while the dirtiness of the persons employed, renders them more disposed to receive the infection of fever. This custom should, if possible, be discontinued.*

The other circumstances might be easily regulated by the overseers, who would perhaps be induced to pay more attention to them, if premiums were held out to overseers, who preserved a given degree of health, among the persons under their care.

The remonstrances of so respectable a body, as a committee of this nature, may also be expected to have a proper influence, when they call the attention of the proprietors of manufactories, to practices evidently destructive of health and life.

* See the second volume of these Essays for farther
variations on the subject, p. 231.

The great difference in the healthiness of different cotton-mills, which it would be invidious to point out here, but which may be easily learnt from the lists of home-patients, kept at the Infirmary, for the last five years, sufficiently proves the benefits of care, respecting the circumstances I have mentioned, and the danger of inattention.

The re-admission of convalescents into manufactories, while they are in a state capable of infecting others, is an obvious cause of encreasing, and perpetuating fevers. To prevent this, it would be proper to retain patients in the fever-wards, till their clothes and persons should be sufficiently purified, and to caution the overseers of manufactories, against the reception of irregular patients, who might return to their employment, without leave from their physician.

A similar hazard, which arises from incautious visits to the sick, may be most

most effectually counteracted by regulations in the fever-wards. It would be cruelty to refuse access to near relations, in dangerous cases, but they might be taught to lessen the danger of receiving infection, by placing themselves between the patient's bed and the window, by averting the face while the patient speaks, and by carefully avoiding to sit down upon the bed.

All linen belonging to the patients, should be washed in the fever-wards, for the same reason.

The practice of smoaking tobacco has been sometimes recommended, as preventative of infection : whatever may be the effect of the herb, properly prepared, I am confident that the acrid, irritating composition, used by labouring people, is more likely to excite than to prevent disease ; and I am persuaded, that I have seen complaints in the stomach and bowels, repeatedly occasioned by its use.

It

It would be very useful, if, among other important rules, contained in the report of the physicians respecting cotton-mills, published in 1784, that concerning the burial of the dead could be enforced. 'That the bodies of such as die of the disorder should be wrapped in pitched linen, and buried as soon as decency and propriety will permit.'

I have often seen interment unreasonably delayed, to the great annoyance of the survivors, and even of the neighbourhood.

The propriety of removing home-patients into the fever-wards, should be determined by the physician of the district; but as the system of the Infirmary is already very complex, I think all applications to the committee should come from the recommenders. Every kind of charitable relief administered to the sick, should be procured in the same manner; for we have found by the experience

perience of last year, that when the faculty at the Infirmary are known to distribute money or other necessities, the charity becomes oppressed by false claims, which intercept the expenditure and attention, due to real sickness.

The obvious extension of the cares of the committee, to a superintendence of the morals of the poor, as intimately connected with the preservation of their health, comprehends a variety of most important objects, which cannot be obtained, without application to the legislature of the country. Whenever that shall be deemed proper, it will afford me the greatest satisfaction, to communicate any remarks, which my professional intercourse with the sick poor has enabled me to make.

I have the honour to be,
gentlemen,

your very obedient servant,

J. FERRIAR.

DAWSON-STREET,
Jan. 4, 1796.

It

It appeared to the board, that the most urgent object of attention, was the frequency of infectious fever; in consequence of which, resolutions were adopted, for establishing fever-wards, on the principles which I had laid down. A committee was then appointed, to fix on a proper situation for the purpose, and to form regulations for the conduct of the establishment.

That the nature of the rules may be better understood, it may be necessary to mention, that poor persons, ill of fevers, or other acute diseases, upon being recommended by a trustee of the Infirmary, are visited by the physicians at their own houses, within certain limits, under the denomination of home-patients. As the expence of furnishing medicines and wine, for this class of patients, was already undertaken by the Infirmary, the committee had only to provide a place for their reception, and to supply them with food and attendants.

The

The committee, after some deliberation, fixed upon four small, adjoining houses, situated without the wall of the Infirmary, and detached from other buildings. The medical gentlemen of the Infirmary expressed their opinion, that those houses might be fitted up in such a manner, that they might accommodate the necessary number of patients. It was calculated, that the expence of altering the apartments, and of furnishing them, would amount to 200 pounds, and that the annual expenditure, including house-rent, would be nearly 400*l*. So moderate were the funds, with which we proposed to lessen the ravages of fever, in this great and populous town, where I have known upwards of three hundred fever-patients, at one time, on the Infirmary-list.

The calculation of the annual expenditure was founded on one, which had been made by Mr. Philips, the very active and intelligent Treasurer of our
Infirmary,

Infirmary, from the expences incurred, by the removal of two patients into the fever-ward, attached to the Infirmary, which I have mentioned before. The experience of seventeen months, which have intervened since the opening of the present fever-wards, has proved this calculation to be accurate. It was supposed that there would be fifteen patients, upon an average, in the wards, during the course of the year. The liberality of the town afforded a subscription, abundantly sufficient for the first demands of the establishment.

By opening communications among the upper rooms of the four houses, four large wards were formed, and each of the front rooms below being capable of containing two beds, we were enabled to accommodate twenty-eight patients conveniently: the following regulations were now drawn up by me, at the request of the committee, for the reception of patients.

Internal

*Internal Regulations for the House of
Recovery.*

I. Every patient on admission, shall change his infectious, for clean linen; the face and hands shall be washed clean with lukewarm water, and the lower extremities fomented.

II. The clothes brought into the house by patients, shall be properly purified and aired.

III. All linen and bed-clothes, immediately on being removed from the bodies of the patients, shall be immersed in cold water, before they are carried down stairs.

IV. All discharges from the patients shall be removed from the wards, without delay.

V. The

V. The floors of the wards shall be carefully washed twice a week, and near the beds every day.

VI. Fumigations with nitre and concentrated vitriolic acid, which have been lately employed with such success in his Majesty's military and naval hospitals, as an antidote to contagion, shall be used, according to the directions of Dr. Smyth, twice daily in all the wards of the House of Recovery. The walls shall be frequently washed with quicklime, fresh slaked in water, and whilst it continues bubbling and hot.

VII. No relation or acquaintance shall be permitted to visit the wards, without a written order from one of the physicians-

VIII. No strangers shall be admitted into the wards; and the nurses shall be strictly enjoined not to receive unnecessary visits.

IX. No

IX. No linen or clothes shall be removed from the House of Recovery, till they have been washed, aired, and freed from infection.

X. No convalescents shall be discharged from the house, without a consultation of the physicians.

XI. The nurses and servants of the house shall have no direct communication with the Infirmary; but shall receive the medicines, in the room already appropriated to messengers from the home-patients.

XII. The committee of the Strangers' Friend Society shall be requested to undertake the office of inspecting the House of Recovery.

XIII. A weekly report of the patients admitted and discharged, shall be published in the Manchester newspapers.

XIV. When a patient dies in the wards, the body shall be removed as soon as possible, into a room appropriated to that use; it shall then be wrapt in a pitched cloth, and the friends shall be desired to proceed to the interment, as early as is consistent with propriety.

XV. All provisions and attendance for the patients in the House of Recovery, shall be provided from the funds of this institution, without any communication with the Infirmary.

The rooms on the ground-floor were appropriated to the servants, and the convalescents. The establishment of servants, consisted of a head nurse, who was expected to superintend the domestic concerns of the house, and three ordinary nurses, a number supposed to be equal to the general exigencies of the institution. On emergencies, it was proposed

posed to hire occasional nurses, while the temporary pressure might render their assistance necessary. The wards were furnished with iron bedsteads, without curtains, and with ticks filled with straw, which was changed at proper periods.

The mode of removing the sick from their own dwellings, adopted by the committee, was that of conveying them in a sedan-chair, purchased for the use of the fever-ward, and kept in the out-building, for that sole purpose.

Part of a vacant piece of ground, adjoining to the houses, was enclosed with a wall, for the purpose of washing and airing the clothes of the patients.

In this state, the institution was opened, May 27th, 1796, under the denomination of the *House of Recovery*, a name which some members of the committee supposed would be less alarming to the
G 2 feelings

feelings of the poor, than that of *Fever-ward*. Some reluctance was apprehended on the part of the patients, from the example of Ashton, but I experienced very little of it amongst the first objects whom I selected, and as soon as the nature of the institution became understood, by the report of those who were discharged, it acquired universal popularity among the poor.

At the opening of the *House of Recovery*, though fevers were not remarkably prevalent in Manchester, the weekly list of home-patients was rather encreasing. In a few weeks, it was reduced to one half of the usual number, and it has never since risen to the former height, notwithstanding the addition of a new class of patients, which I shall soon mention. The most satisfactory evidence on this subject, is afforded in the following report, from the Weekly Board of the Infirmary.

“ The

“The Weekly Boards having observed with great satisfaction, the remarkable diminution of the number of home-patients, in the lists laid before them every Monday, since the opening of the HOUSE OF RECOVERY in May last:—This Board thinks it may be proper to inform the public, that cases of Fever, in particular, have been still less frequent than might be supposed from a cursory inspection of the lists. It is obvious that the number of home-patients weekly admitted, is not, upon an average, more than half the number admitted previous to the opening of the HOUSE OF RECOVERY; but it appears from an inspection of the physician’s books, that the proportion of fever-patients, out of the whole number of patients, is much smaller than formerly: thus, on comparing the home-patients, admitted in January 1796, with those of the last month, it appears that in January 1796, the whole number of home-patients was 296, out of which 226 were cases of

G 3 fever;

fever; but in January 1797, notwithstanding the severity of the season, the number of home-patients was only 161, out of which 57 were ill of fevers.

It must be farther considered, that for several months past, the BOARD OF HEALTH has agreed to admit patients in fevers, to the HOUSE OF RECOVERY, from beyond the districts, and *one third* at least of the number which appears on the books must be accounted for from this regulation, by which the environs of the town are cleared from epidemic fever. Making the deduction of this extraordinary class of patients, it is evident that the frequency of fevers has been reduced in a surprising degree.

Another important consideration, which suggests itself to the observation of the Board, is, that during the great alarm and distress, occasioned by epidemic fevers, the claims of patients labouring under them supersede almost all others
on

on the attention of the Trustees ; so that scarcely any other cases of disease have been admitted at such times.

Those who will take the trouble of looking over the lists of diseases in the Physician's books, will be greatly struck with the difference, on seeing the variety of complaints entered within the last half year. Thus the benefits of the charity are more equally extended, than when the Infirmary and the town were oppressed by the enormous croud of fever-patients, which was pouring in upon them, before the means of removing fever-patients were provided."

It was soon found, that the removal of patients, residing within the Infirmary districts, was but a partial measure for checking the progress of fever. Many narrow and crouded streets had been excepted from the visits of the physicians, on account of their distance, or had arisen beyond the appointed limits,

during the rapid encrease of the town, previous to the war. It was impossible to cut off the communication between infected persons, situated beyond the districts, and their connexions within them, especially as the division, in some streets, which extended in a straggling manner into the country, is an imaginary line. Those extremities, therefore, remained, as nurseries of the disease, and it became absolutely necessary to remove patients into the House of Recovery, from any distance, whence they could be conveyed in the sedan.* In adopting this resolution, the committee had to consider, that by the rules of the Infirm-

* As the physicians of the Infirmary cannot visit patients thus circumstanced, intelligence respecting the nature of the complaint is obtained, either by means of some medical practitioner, who has seen the patient, in the first instance, or from the physician's clerk, when the distance is not great, or by good information from the neighbourhood. There is little room for deception. The hardest vagrant would shudder at the idea of entering a fever-ward, when affected with any other disease than a fever.

mary,

mary, no medicines could be dispensed from that charity to patients thus circumstanced. They, therefore, agreed to indemnify the Infirmary, if required, for the expences incurred, by introducing patients from beyond the limits; but the general saving to the Infirmary has proved so considerable, by the diminution of fever-patients, that, I believe no demand of this kind has ever been made upon the Board of Health.

Not long after the opening of the House, I had a strong proof of its salutary effects. I was requested by the proprietors of a large cotton-mill, within a mile of Manchester, to inspect the state of the persons in their employment, and to examine into the circumstances which had produced an epidemic fever among them. Nothing appeared in the factory itself which could occasion disease, but when I came to examine the adjoining village, in which the people resided, it was evident that causes
of

of fever, similar to those which operated in Manchester, subsisted there. Several dirty families, who had contrived to make even new houses offensive, received lodgers, without regard to convenience in their accommodation; cellars were inhabited; and almost every house was over-crowded. The existence of infectious fever, which now appeared for the first time among them, was traced to the settling of a family in the village, who had suffered much from the typhus in Manchester, and who had probably carried with them infected clothes or furniture, as one of them was only in a state of convalescence at the time of their removal. I immediately caused several patients to be carried into the House of Recovery, and recommended that the lodging-houses should be cleared of their superfluous inhabitants, that the vapour of the nitric acid should be extricated in them, and that some families, who seemed incurably dirty from long habit, should be dismissed from the place.

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These proceedings checked the progress of the disease for some days, but as one or two patients had objected to their removal to the fever-ward, it broke out again, and I was obliged to order eight patients, in different stages of fever, to be removed in one day. The situation of two of these was deplorable. Their parents had been swept off by the disease, and as great terror prevailed in the neighbourhood, these little wretches were left, unknown to the proprietors, almost destitute of every thing. One of them died from the effects of previous hunger, very soon after its reception into the House of Recovery.

Since this second removal of patients, the village has been perfectly healthy, during nine or ten months.

It is none of the least advantages consequent on this institution, that the owners of cotton-mills have been instigated, by the facts brought before them,
to

to pay a more scrupulous regard to the health of their work-people. The buildings are in general kept cleaner, and are better ventilated than formerly, and in most of the large cotton-mills, the persons employed are not exposed to more numerous causes of disease, than any other class of labourers, excepting in the process of *mule-spinning*. There, indeed, it happens unfortunately, that the work-people fancy an extraordinary degree of heat to be necessary, which, when accumulated in close rooms, whether it is conducted by flues, proves highly injurious to health. But this is the error of the servants, not of the masters, some of whom shew great anxiety to correct it.

I can also perceive, that a salutary impression has been made on the minds of the poor, respecting the utility of cleanness in their houses. The idea of fever comprehends, among them, that of ruin to their circumstances, and de-
sertion

sertion by their neighbours: it may, therefore, be expected, that they will catch at every means within their reach to avoid so dreadful an evil. When they find that a public charity extends its care for them so far, as to white-wash their houses, when the physicians report it to be necessary, they must feel the propriety of attending more to this object.

It is true, that many causes of fever, and other disorders remain yet untouched by this institution. To render the labouring part of the community more healthy, no method will be sufficient, but that of providing public lodging-houses, well-regulated, for their accommodation. This would be a very arduous task, yet I am not without hopes that it may, at some future period, be accomplished.

The reader may have observed, that I had proposed to establish fever-wards
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in different parts of the town, in the paper laid before the committee; this appeared, at first sight, to be the easiest method of disposing of the patients; but from our experience of the present plan, I am persuaded that every purpose may be answered, by removing patients to the present situation. It may, and it probably will become requisite, to enlarge the present buildings. The accommodations are sufficient for the extent of the town at this time, but upon the revival of trade, and a consequent accession of new inhabitants, epidemics may occur, in which it may be necessary to provide beds for a more considerable number of patients. A building capable of containing fifty patients, would probably be adequate to every emergency. Some rooms ought to be set apart, for the occasional reception of patients affected with Scarlatina Anginosa, which makes dreadful havock, when it rages among the poor, and for admitting

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at different periods, in Portland-street, Silver-street, and the other streets in that pile of buildings, in the neighbourhood of the House of Recovery.

From September 20, 1793, to May 20, 1794, (a period of *eight months*, selected on account of the usual prevalence of fever) number of fever-patients in these streets, 400.

From September 20, 1794, to May 1795, number of fever-patients in these streets, 389.

From September 20, 1795, to May 20, 1796, number of fever-patients in these streets, 267.

the recommender, are entered in the books kept by the physicians' clerk; the number of prescriptions, and the event of the disease, with the dates of the admission and discharge, are likewise registered in them, with the greatest regularity: so that they afford authentic information. respecting those subjects.

From

ACCOUNT OF FEVER-WARDS. 113

From July 13, 1796, to March 13, 1797 (being a period of *eight months*, since the opening of the House of Recovery), number of fever-patients in these streets, 25.

In July last, five.

In August last, one.

In September last, none.

From the 4th to the 23d. of February last, two.

The bills of mortality for 1796 shew, that there has been a decrease in the burials, amounting to nearly 400.*

From the opening of the House of Recovery on the 19th of May, 1796,

* "On referring to the physician's books this day, July 30th, 1797, it appears that there has been only one fever-patient in these streets, during the last three months."

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to February 3d, 1798, 623 patients have been admitted : of these 53 have died ; 15 remain in the house. The number of deaths, since the beginning of May, 1797, to Feb. 3, 1798, has been only 13, though the House has been generally full, during the whole period. The most striking proof of the benefit which the public derive from this institution, results from observing the diminution in the number of the home-patients of the Infirmary : the number of home-patients, from June 1795, to June, 1796, was 2880 ; from June, 1796, (immediately after the opening of the House of Recovery,) to June, 1797, the number of home-patients was 1759 ; that is, the illness of 1121 persons has probably been prevented by this institution, in one year ; for the home-patient's list has generally encreased every year.

To this I can add, that when we were threatened with a return of the epidemic, one hundred and forty-nine persons were

received.

received into the House of Recovery, from the beginning of May, 1797, to the beginning of October, and of these, four only died, though, in many instances, the dangerous nature of the fever was the motive for removing the patient.

But many of these facts, and the arguments in favour of such institutions, have been so ably stated by Dr. CURRIE, of Liverpool, in his late publication, that it is unnecessary for me to proceed farther on this part of the subject.

The situation of our House of Recovery, is particularly favourable to a more frequent attendance on the patients, most of whom it was previously impossible to visit more than once a-day, while they were dispersed through all parts of a great town. In dangerous cases, they are now visited twice or thrice a-day, and are furnished with night-watchers; in a word, every efficient attention is paid to the poorest,

and most friendless objects in our wards, which money and influence can procure for the most opulent individual.

The number of cures effected in the House of Recovery, must be principally ascribed to the attendance, and the comforts experienced by the patients. A clean bed, a quiet ward, an attentive nurse, and the frequent visits of the physician, are so many medicines to a poor creature, who has been languishing in a cold, damp cellar, or in a garret exposed to the injuries of the weather, amidst the neglect and confusion of a wretched family, clamorous from hunger, or brutal from debauchery.

In the practice of the House there is nothing peculiar, excepting the use of cold bathing, which I introduced among the home-patients in 1791, and which I have employed very successfully in the fever-wards. I have not used it in the first days of fever, as danger is frequently
to

to be apprehended from the tendency to congestion, particularly in the head. Perhaps the scrophulous constitution of a large manufacturing town, may render suppuration in the brain more frequent, in situations resembling ours. The severe cough, which so often attends our synochus and typhus, from their first appearance, also strongly contra-indicates this practice with us, at the beginning of the disease.* But when the fever runs on to a great length, without any particular affection of the head or lungs, when common stimulants lose their effect, and when the extreme debility of the patient takes away all hope of restoring him by ordinary means, I find the cold

* I observe with great satisfaction, that Dr. Currie's experience of this remedy, and my own, illustrate each other. He has clearly established its utility at the first accession of fever; and I have found it invariably safe and salutary in the more advanced state of the disease, when he generally declined employing it. Perhaps, from difference in situation and employments, there may be more tendency to partial congestion, in our epidemic, than in that of Liverpool.

bath eminently serviceable. Among the home-patients, I was frequently under the necessity of employing simple ablution with cold water, from the want of conveniences: in the House of Recovery we use the slipper-bath, and immerse the patient. I have never known any injurious effect produced; on the contrary, patients have often declared, that they felt themselves agreeably refreshed by it. In some cases, where great stupor accompanied the other bad symptoms, and where I was not without suspicions respecting the state of the brain, I have yet ventured on the use of the cold bath, after applying leeches, or cupping-glasses, to the temples, and I have had the satisfaction of seeing the patient recover, from a state little short of death. Immersion generally brings on very quiet and salutary sleep, in the course of an hour or two. One of my patients, in whom the effects of the bath appeared to go off towards evening, was bathed

bathed twice a-day. The patients' drink is commonly administered cold.

In cases of typhus, which begin with diarrhoea, when the stomach becomes so irritable as to reject medicines, wine, and other kinds of sustenance, I depend on repeated doses of opium in substance, sometimes combined with aromatics, frequently given alone. I have cured several cases of this kind, when the fever run on for four or five weeks, without giving a single dose of bark. In these circumstances, when there is no fixed pain in the bowels, I join the use of the cold bath with that of opium, with great advantage. Astringent glisters, administered cold, have a powerful effect in checking febrile diarrhoea. In one case, when large quantities of laudanum thrown up, combined with strong astringents, were instantly returned, and small loose stools were discharged almost every half hour, I directed three ounces of a strong decoction of galls to be injected cold ;

the effect was, that the patient had no return of diarrhoea for four hours, and then parted with a figured stool. The nausea, which is always a formidable symptom, may sometimes be relieved by giving, repeatedly, small quantities of milk and water; in general, it yields to the use of opium, and burnt brandy. I find, that obstinate costiveness, which sometimes becomes as troublesome as the opposite state of the bowels, is best relieved by calomel. Five or six grains commonly operate very gently with an adult, in this state.

When patients are admitted into the House, a flannel dress is provided for them, and their own clothes are carried into the yard, to be washed, scoured, or ventilated. During their convalescence, they wear the dress of the house; which consists of a jacket and trowsers for the men, and of a wrapping gown and petticoat for the women. At the time of discharging patients, their own clothes

are

are returned to them perfectly clean, and they rejoin their families, and resume their occupations, without the hazard of communicating infection to others.

Institutions of this nature are particularly adapted to manufacturing towns, but, I believe, there is not a town in the kingdom, containing four thousand inhabitants, which would not be greatly benefited by similar establishments. Abuses and errors prevail every where among the lower classes of society, which require both instruction and assistance from the more enlightened. Much misery, much actual suffering, are unavoidable in all states of society, yet when the important interests of the poor are properly watched over, their calamities admit of great alleviation. The facts detailed in this paper have been collected, to shew by how simple a method, and with how slight an expence, one of the chief scourges of mankind may

may be disarmed of a great part of its terrors. Other towns, I trust, will perceive it to be their interest to adopt measures of the same kind.* Reliance may be placed on our experience here, for I have been less desirous to celebrate the triumph of art, than that of humanity.

The success attending the establishment of our House of Recovery, has exceeded the warmest expectations of its supporters. But during several years, we were limited in space, and unable to receive the whole number of patients, whom it was expedient to admit. Some adjoining, and neighbouring houses were therefore occasionally engaged, in the

* In April, last, I was requested, by several of my friends in Stockport, to furnish a plan for establishing a fever-ward in that populous town. The design has been pursued with great spirit, and a sum has been raised, sufficient to enable the Trustees to erect a building for the purpose. The same general causes of fever exist in Stockport, which render the disease so common in this town.

same

same street, for the admission of patients, and thus without any previous intention on our part, a set of experiments was made respecting the distance to which contagion will extend. In the first instance, no person suffered in the neighbouring buildings, where the street was only four yards wide, the windows of the occasional fever-ward being generally open, and the house full of patients. In another instance, a house, capable of containing twenty-five patients, not at all separated from the adjoining houses in the same row, was used for twelve months as a fever-ward, without the occurrence of any fever in the immediate neighbourhood. Thus the *experimentum crucis* has been tried, and the innocence of contagion, when properly diluted with atmospheric air, is fully established.

So completely were the public now convinced of the utility of the plan, that a subscription, suitable to the opulence

lence and spirit of the town, was raised ; a large area was purchased, and a Fever-Hospital erected, capable of easily containing an hundred patients. The expence of the building was upwards of 5,000*l*.—Since it has been in the power of the Physicians to admit every case of infectious fever, as it occurs, we have felt ourselves completely masters of the disease. Epidemic typhus is now unknown to us, while it has been raging in some of the neighbouring towns. A part of the space is appropriated for the reception of patients in scarlatina anginosa, and although this disease has been repeatedly introduced into the town, generally from Liverpool, and lately from Yorkshire, its progress among the poor has always been checked, by the removal of the patients.

The mortality of fever-patients has varied considerably, in different years, as the following table will shew. I have added an extract from the annual report
on

on this subject, which was drawn up by Dr. Roget and myself.

“During the last year, the proportion of deaths among the patients in the house has not been so great as the preceding year: but as during some former years it has been even less than at present, it may be proper to make a few observations upon this apparent diminution in the success of the practice.

“The average proportion of mortality during the last year has been one in nine. When it is considered that in hospitals, which admit a variety of diseases, both chronic and acute, the general proportion is one in twelve, this augmentation, in an hospital destined for the reception of the worst cases of fever, will appear nowise surprising. But, as during the first years of the establishment of the Fever-wards, the number of deaths was not more than one in eleven, it may be expedient to state some farther circumstances which account for the variation.

The

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“The danger attending fevers depends much on the nature of the season, and of the prevailing epidemics. With an equal exertion of skill and attention on the part of the physicians, the result of their practice will be very different in different years. This will appear from the following table, exhibiting the proportion between the deaths and recoveries at different periods since the house has been opened.

(The house was opened in May, 1796.)

Years.	THE NUMBER OF PATIENTS.				Proportion of Deaths.
	Admitted.	Cured.	Dead.	Remaining at the end of each year.	
From 1796 to 1797	371	324	40	7	1 in 9†
1797—1798	339	300	16	23	1—20-
1798—1799	398	360	27	11	1—14†
1799—1800	364	315	41	8	1—9-
1800—1801	747	645	63	39	1—11†
1801—1802	1070	956	84	30	1—12†
1802—1803	601	539	53	9	1—11†
1803—1804	256	215	33	8	1—7½
1804—1805	184	144	34	6	1—5¼
1805—1806	268	235	—	4	1—9-
Total.	4453	4033	420		

From

“ From 1804 to 1805, many cases were admitted of a most lingering and dangerous kind. Hardly any patient brought into the house escaped without hazard, and many deaths took place from sudden changes in the state of the fever, contrary to the usual course of the disease, and only imputable to the peculiar character of the epidemic. Similar cases occurred at that time, in private practice.

“ Since the opening of the New House of Recovery, the patients admitted have been chiefly selected by the physicians themselves: the clerk having only power to admit those who reside beyond the limits of the districts. Slight cases are therefore scrupulously rejected; and patients are received only in that state, in which the fever is either dangerous to themselves, or liable to be communicated to others. The New House of Recovery has consequently contained a greater number of hazardous cases than was to be found, during an equal period, in the buildings

buildings originally occupied for the same purpose. But the ends of the institution have thus been more fully answered. The progress of infectious fever has been effectually arrested; and the destructive epidemic of scarlet fever, which was actually introduced into the town during 1805, from Liverpool, has been completely suppressed. In effecting these purposes, so important to society, so consoling to humanity, the physicians have regarded the public good more than their own immediate reputation; and have preferred the solid benefit of preventing the wide diffusion of contagion, to an ostentatious list of cures, which might easily have been swelled to any amount, by the admission of cases not conducive to the views of the subscribers, or to the welfare of society."

AN AFFECTION
of the
LYMPHATIC VESSELS,
HITHERTO MISUNDERSTOOD.

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OF AN AFFECTION OF THE LYMPHATIC
VESSELS, HITHERTO MISUNDERSTOOD.

IT has been long known, that irritation may be propagated along a lymphatic vessel, from its extremity, to its entrance into one of the larger conglobate glands. The vessel can be distinctly traced in its course, by its hardness and enlargement, and frequently by a slight inflammation of the superincumbent skin, forming a red, or purple streak, and extending with the affection of the vessel. But practitioners do not seem to be aware, that all the lymphatics of a large limb may take on a disposition to inflammation, from internal causes, though such an occurrence might have been expected, *a priori*. The following case

appears to me to demonstrate this fact, and to furnish an explanation of cases, which have been described, but I think not well understood, by former writers. It will serve, also, if my view of it be correct, to direct our practice, in circumstances where little has yet been attempted.

A gentleman of an irritable habit, subject to severe bilious attacks, to hæmorrhoidal discharges, and sometimes to a considerable degree of rheumatism, was affected with pain, stiffness, and swelling, in the left leg and thigh. The pain and swelling began in the foot, and extended up to the groin. When I saw him, the swelling was uniform, tense, and shining, without discolouration of the skin. Upon applying my hand, I felt great hardness and enlargement in the glands of the groin, and in those of the ham; the patient complained most of pain in the ham. The vessels could be felt much enlarged and
hardened;

hardened, for a little way above the ham, but the extreme tension of the skin prevented me from tracing them to any considerable distance.

A bilious fit had preceded this attack, and the stomach was still weak, full of flatulence, and easily excited to vomiting. The patient had also been exposed to the action of cold and moisture.

About two years before, this patient had undergone a variety of complaints, arising from an accumulation of bile, and had discharged a considerable quantity of hæmorrhoidal blood. After this, the left arm had become swelled and painful, but not to a degree equal to the disorder which I have described. The disease in the arm was at that time removed, by the application of a blister below the elbow-joint. After the disappearance of the swelling, an acute pain in the right side supervened, accompanied with tension of the abdomen, and
I 3 obstinate

obstinate costiveness. These symptoms continued with great severity, during three days, and were carried off by the brisk action of senna and rochelle salt.

In considering the affection of the leg and thigh, I conceived that there were sufficient marks, to indicate a general inflammatory state of the absorbents of the limb. Those symptoms, from which we conclude a single lymphatic to be inflamed, were distinguishable in all the superficial lymphatics, and in the conglobate glands of the part. I determined, therefore, to try the effect of topical bleeding, and I directed several leeches to be applied to the leg, just under the knee, as the pain and stiffness were most considerable in the ham. Almost immediate relief was obtained from the action of the leeches. Next day, there was an evident decrease of the swelling, and I could distinctly trace the superficial lymphatics, entwisted like bundles of cord, through the whole course of the limb.

limb. The inguinal glands on the left side were still much enlarged, and very painful, but the affection seemed to stop there, for no pain or distention was felt in the abdomen.

The disease gradually lessened from day to day, while the patient's bowels were kept open by gentle cathartics, and in the course of a week or two, little inconvenience remained.

When I first apprehended the nature of the complaint, I felt great anxiety, lest the inflammation should extend to the absorbents in the internal cavities. Fortunately, the inflammation of the inguinal glands stopped the extension of the disease. This event may be accounted for, on two different suppositions. The severe irritation of those glands might extinguish the degree of inflammation, previously subsisting in the vessels, as a blister applied to the skin would have done; or the inflam-

matory disposition might be exhausted, by its extension to the inguinal glands, and by the violence of its action upon them. The latter supposition appears more probable; for the inflammation of the glands in the ham, though very considerable, did not terminate, however it might lessen the affection of the vessels; and we know, from the effects of wounds of the absorbents, that the vessels themselves are generally incapable of secreting pus, or of producing inflammatory exsudation, though the conglobate glands suppurate, like other vascular parts.

The tense swelling of the limb, clearly marked the distinction between the class of vessels affected, and those of the sanguiferous system. The absorbents were rendered incapable of performing their functions, by the thickening of the vessels, and the obstruction of the glands; but the arteries being in a sound state, the exhalents continued to pour out their fluid, which, not being absorbed, must

must stagnate in the cellular membrane. The theory and the fact accord perfectly with each other. The difference between this state of accumulation, and that of common dropsy, seems to be this, that when the lymphatics are generally inflamed, absorption ceases entirely, for the time; but that in cases of oedema, or anasarca, absorption goes on, though imperfectly, while there is any vigour in the habit. At length, absorption is stopped, in dropsical cases, and the integuments give way; but before this event takes place, I have generally found the swellings assume the tense, shining appearance, accompanying the lymphatic inflammation.

It is impossible to avoid indulging some reflections, upon an occurrence which seems to open new views in pathology. Our recent acquaintance with the absorbent system, has inspired a just diffidence, respecting its general influence on the doctrine of disease; and the
care

care taken to discriminate the functions of this system from those of the heart and arteries, has, perhaps, occasioned a belief, that they have fewer properties in common than farther observation will ascertain.

The case, which I have detailed, appears, in some respects, to meet Dr. Latham's ideas on the subject of rheumatism, and if it were allowable to denominate a *species* from a solitary fact, this might be called *Lymphatic Rheumatism*. But this very fact shews, that inflammation of the lymphatics produces very different symptoms, from inflammation of the muscular fibre, which constitutes acute rheumatism, and of which the existence has been ascertained by dissections. The pain, in lymphatic inflammation, is referred to the enlarged glands, and is not remarkably increased by motion; there is more stiffness than actual pain throughout the limb; the swelling is general, and the skin

skin is not discoloured. But although acute rheumatism sometimes affects the greater part of the external muscles, it occasionally appears in a very limited sphere. A single muscle may be attacked by it, independently of the others. I once saw it confined to the belly of the biceps muscle, of the arm. Perhaps this observation may serve to elucidate the curious cases of limited muscular pain, which Mr. HOME has given in the Croonian Lecture. Much, indeed, must be allowed for the state of debility, under which some of his patients seem to have laboured. I remember, that when recovering from a severe typhus, about eighteen years ago, if I happened to stretch my arm or leg, inadvertently, to the full extent, an acute pain was produced in all the muscles employed in the action, though in ordinary motion, there was no uneasiness felt in any of the limbs.

I see no reason for supposing, that this affection

affection is necessarily confined to the extremities, particularly to the lower limbs. The causes which produce inflammation of the lymphatics in one part of the body, may occasion it in the same order of vessels, when applied to them in any other part of the body. One circumstance, indeed, must be admitted, to render the extremities more frequently liable to such an attack. The great number, and the size of the superficial lymphatics in the extremities, particularly in the lower, may encrease the probability of their undergoing this affection. I suspect, that it is a disease not unfrequent in irritable habits; but that hitherto, the enlargement of the glands, and the general swelling, have drawn off the attention of practitioners from the situation of the vessels. What symptoms attend inflammation of the absorbents, in the cavities, we are yet to learn, unless, as I suspect, the complaint mentioned in p. 133, proceeded from this cause. It is not impossible, that

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encysted dropsies may arise from complaints of this nature. Ascites is sometimes preceded by internal pains, which are vaguely referred to the stomach. The inflammatory disposition may be fully exhausted among the numerous glands of the mesentery, without extending to those of the groin; and the slowness with which the swelling disappears, affords sufficient proof, that the absorbents do not readily resume their functions, after the inflammation has subsided.

It is also not improbable, that in different degrees, and under circumstances somewhat different, affections of this class may lay the foundation for scirrhus in the mesenteric glands, and for atrophy. The inflammation of the lymphatics does not seem, in its first tendency, very dangerous. By the pain which it produces, it stimulates the arterial system, and a farther cause of irritation may be found in the accumulation of the fluid effused by the exhalents; but,
independently

independently of these circumstances, there does not appear to have been any direct sympathy between the sanguiferous and the absorbent systems, in this instance. Yet the absorbents are known to assume an inflammatory disposition, in consequence of diseases in vascular parts. The irritation of a chancre, or the excoriation of the glans, by the discharge in gonorrhœa, will inflame the lymphatic vessels, and even the glands in the groin. It has occurred to me, that the view which I have taken of this subject, may explain a singular fact, which has not yet been satisfactorily accounted for. It frequently happens, that in a virulent gonorrhœa, the surface of the glans becomes completely raw, and is constantly covered with the infectious discharge, yet the habit is not infected, though the disease continues for several weeks, and though mercury is used sparingly, or not at all. In these cases, I believe it uniformly happens, that the lymphatics on the sides of the penis

penis inflame, become hard and enlarged, and that there is a painful enlargement of the inguinal glands, on one or both sides. It seems probable, that in consequence of their being thus affected, the vessels lose their power of absorbing, and that the noxious matter is denied admittance into the system. This may be one of those regulations of Providence, (which physicians have thought proper to call the *avτονπαρεια*) for preventing the introduction of poisons into the circulating system.

In the case of chancre, when the ulceration has once taken place, infection is unavoidable, because by the laws of the system, every ulcerated surface is an absorbing one.

By the theory which I have suggested, several problems in the history of venereal complaints may be resolved. If absorption of the contagious matter be prevented, by the inflammation of the

the absorbent vessels, and by inflammation propagated to the glands from those vessels, it will be easy to conceive, that infection of the habit will not take place under such circumstances; that mercury may exert an action unfavourable to the disease of the lymphatics; that the pus secreted by the suppurated glands may not be capable of communicating a specific disease; and that in buboes, thus produced, the process of healing may be as slow, as in any scrophulous abscess.

The lymphatic system appears to be particularly affected in the plague. Enlargement, and painful induration of the conglobate glands in the groin, or armpit, seem, from Dr. Russel's account, to rank among the most certain diagnostics of the complaint. This is a subject of great curiosity and interest, but having never seen the disease, I do not feel myself qualified to discuss it. From Dr. Russel's description it would seem, that in certain cases of plague, many of the

the superficial lymphatic glands, dispersed over different parts of the surface of the body, become affected.

A disease, resembling this which I have described, in almost every symptom, has been mentioned by several writers on midwifery. They have supposed it to be peculiar to women in the puerperal state, and while they have differed in their opinions respecting its causes, they have agreed in referring it to circumstances exclusively connected with parturition. The general idea to be collected of this disorder, from Mr. White's Treatise* on it, is, "that about twelve or fifteen days after delivery, the patient is seized with great pain in the groin of one side; accompanied with considerable fever.—The part soon becomes affected with swelling and tension, which extend

* An Enquiry into the Nature and Cause of that Swelling in one or both of the Lower Extremities, which sometimes happens to Lying-in Women, p. 7 et seq.

to the labium pudendi of the same side only, and down the inside of the thigh, to the ham, the leg, the foot, and the whole limb; and the progress of the swelling is so quick, that in a day or two, the limb becomes twice the size of the other, and is moved with great difficulty, is hot and exquisitely tender, but not attended with external inflammation.—It (the swelling) is very smooth, shining, and pale, and even and equal to the touch in every part, except where the conglobate glands are situated, which, in some cases are knotty and hard, as in the groin, the ham, and about the middle of the leg, at its back part.”

The only points of difference between this abstract, and my account, are, that in my case, the swelling began at the foot, and that the enlargement of the absorbent vessels did not occur to Mr. White, as indeed it is not distinguishable till the swelling abates considerably, and, in some cases, can hardly be felt at all.

Mr. White

Mr. White has laid particular weight on the commencement of the swelling at the groin, because he has made that fact the basis of his theory; and from his general accuracy, I have no doubt that such was the progress of the swelling, in the cases which fell under his own observation. But it is not invariably the course of the disease. Mr. Simmons informed me, that he had seen it confined to the calf of one leg, after delivery, where the swelling had not affected the foot, and did not extend above the knee; and in a very remarkable case, which I shall mention afterwards, the swelling began also at the distant extremity of the limb. These facts prove clearly, that the disease may be produced, without the rupture of a lymphatic in the groin, which Mr. White imagines to be effected, by the pressure of the child's head against the brim of the pelvis, during labour; a supposition very questionable in itself, even if there were no direct facts subversive of his opinion. The theory

which I have proposed, is liable to no difficulties, and indeed the proof of inflammation is so evident, that Mr. White is obliged to admit that it happens in the first stage of the complaint,* but he declares, that “this inflammation is not the original disease; but a symptom only, occasioned by the distension of the lymphatic vessels and glands.” Why should the lymphatic vessels and glands be *distended*, if they were in a sound state, and capable of absorbing, at the time when the effusion took place? The effusion of fluid in dropsy does not inflame those organs. Some cause must evidently exist, on Mr. White’s own supposition, to prevent absorption of the effused fluid from taking place; and that cause, upon my theory, must produce and support the effusion.

I combat this opinion more earnestly, because it tends to prevent the practi-

* P. 59.

tioner from employing the only remedy, which I have found to shorten the disease; that of topical bleeding: a remedy, trifling if Mr. White's theory were just, but indispensable if mine be well-founded.

I cannot avoid noticing, that the possibility of accounting for this disease, from inflammation of the absorbents, had occurred to Mr. White, and that he has rejected the supposition, upon grounds inconsistent with his own statement of the symptoms. In speaking of the remote cause of the disorder, he says, (p. 47.) "It may be said to be owing to an inflammation brought on the trunk or trunks of the lymphatics, by the pressure of the child's head on them during the process of labour, or on the glands through which these trunks must pass, and which lie on the edge of the pelvis. This may produce an adhesion of the cells of these glands, and make them impervious, and cause a stagnation of

K 3

lymph

lymph in the extremity, and thereby produce the disease in question. The glands may perhaps in time recover themselves, or the absorbents below the glands may go round, and take a new road. The objection to this theory is, that the disorder most frequently does not appear till several weeks after delivery, whereas one would have expected it always to have appeared in a few days, which seldom happens."

But upon turning back to Mr. White's general history of the symptoms, (p, 57)* it will be found, that he fixes the time for the appearance of the disease, at *twelve or fifteen days* after delivery; a period which rather belongs to the denomination of a few days, than of several weeks. And upon referring to the cases themselves, it appears, that in the first patient, the symptoms came on upon the eighth day; in the third case, on

* Inquiry, &c.

the tenth ; in the fifth case on the ninth ; in the seventh case, on the thirteenth ; in the tenth case, on the fourteenth ; in the eleventh case, on the sixteenth ; in the twelfth case, on the twelfth day ; in the thirteenth case, on the ninth ; and in the fourteenth case, within twenty-four hours. So that in nine cases out of fourteen, which Mr. White has stated, the latest period of the accession of the disease was *sixteen days*. The result of his information from Mr. Smith (p. 34) is, that it “ always began in about fourteen or fifteen days after delivery,” and that from Mr. Pool (p. 35) is, that “ four of these were attacked with it in a fortnight after delivery, one in three weeks, and another in forty-eight hours.” The assertion at p. 47, therefore, does not appear conformable to the facts, from which it must be supposed to have been deduced. Indeed, if Mr. White’s assertion in that passage were true, namely, “ that the disease does not appear till several weeks after delivery,” it would

be fatal to his own theory. For the rupture of a lymphatic, if it could produce the distension of the limb, as he supposes, must produce it almost immediately, at least in the neighbourhood of the supposed rupture.*

On

* Mr. White, on the last edition of his book, complains of this passage as a levity; but surely without reason. The question respects a fact of importance in the history of the disease, which is fatal to his opinion. I should wish to avoid the introduction of any unnecessary squabbling in a grave discussion, but I could not push my complaisance so far, as to say with *Jerome*, in the *Compère Matthieu*, *La Nature á tort, et le Compère á raison*. There is indeed a passage in Mr. White's last edition, which I must notice as equally indecent and profane. To substantiate this charge, it is necessary to insert it in this note, from whence it may perhaps be extracted by some future writer on the *Art of sinking in Prose*, as a specimen of the *Obstetrical Bathos*.

“ The pathognomonic symptom of this disease is a
 “ swelling of the whole *labium pudendi*, on the same
 “ side *only*, on which there is a firm, glossy, warm,
 “ tense, elastic, painful, sudden swelling, of a pale
 “ white colour, which attacks the hypogastric region,
 “ the loins, nates, groin, thigh, leg and foot of a
 “ lying-in woman; and I must beg leave to impress
 “ this,

On the other hand, there are cases, in which we have reason to believe, that the rupture of one or more lymphatic vessels actually happens, yet in which no swelling of this nature follows the accident. In dislocations of the humerus, for example, where the capsular ligament is torn, and the head of the bone is forced under the axilla, it is very pro-

“this, upon my readers, that when one limb only is affected, the swelling is confined so exactly to the *labium pudendi* of that side, that if a line were drawn from the navel to the *anus*, it would be found never to go beyond that line in the smallest degree; and I must observe that this pathognomonic symptom of the swelling of the corresponding *labium pudendi* only is never wanting, in any case whatever. About nine times out of ten, it attacks one side only,”—

[I must here observe a strange inconsistency between this assertion and that immediately preceding it. If the symptom is wanting in *no case whatever*, how comes it to appear in *about nine cases out of ten only* ?]

“and the limits are so exactly drawn, that in no case whatever does the swelling rise higher than the loins and hypogastric region, nor spread wider than the spine and the linea alba. And this is so constantly and invariably the case, that it may confidently be said SO FAR SHALT THOU GO AND NO FARTHER”!

bable

bable that some of the lymphatics may give way. Yet we are not acquainted with any instance, in which the absorbent vessels, or conglobate glands have become enlarged and hardened, accompanied with this particular kind of effusion, though such dislocations have not been reduced for several months, and sometimes not at all. Rupture of the absorbents is certainly a much more probable occurrence, in such circumstances, than in the act of parturition.

The case to which I referred in p. 147, was accurately drawn up by Mr. Simmons, from his notes, at my request, and I insert it here in his own words, that the public may be in full possession of every thing yet known on this subject.

—— “ aged 28, became a home patient of the Infirmary, under my care, in the year 1791. The right ankle-joint was completely carious, from a scrophulous

phulous affection, and her general health much impaired. During the progress of the disease in the joint, she had proved with child, and was now in the sixth month of her pregnancy. Such generous diet as could be procured from the charitable contribution of her respectable neighbours, added to the pittance acquired by her husband, was recommended, and she was supplied with medicines and applications from the Infirmary. At the proper time, she was delivered of a fine healthy looking child, after an easy and natural labour. About ten days from the time of her delivery, she complained of a swelling in the calf of her left leg, and of uneasiness in the inguinal glands on the same side, which, she informed me had subsisted for several days. The leg presented no discolouration, but was hard to the touch, of a shining appearance, and painful when pressed; the glands in the groin were enlarged, and painful on pressure. Her general health was,

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on the whole, amended since my first attendance, although the caries continued its ravages, unchecked by the particular circumstances of the case, or of the means used. As the affection was merely local, an anodyne fomentation was advised to be used twice a-day, and the saponaceous liniment with laudanum was applied after each fomentation. By these means, and these only, excepting the *electuarium laxans*, and opiate pills, which she had taken for several months, the disease subsided in less than a fortnight; the swelling never having extended beyond the calf of the leg.

“ It will be impossible to explain this instance of disease, on the supposition of a ruptured lymphatic; and there was no evidence of any injury being done to any of the absorbent glands during labour.

“ The carious limb was removed, as soon as she was fit to be admitted into
the

the hospital, and the stump healing by the first intention, her general health was soon restored, and has continued with only casual interruptions to the present period."

Little can be known respecting the remote causes of a disease, which has been correctly observed in so few instances. In my patient, it was apparently produced by the action of cold and moisture, and it has probably been occasioned by similar causes, in those cases where it appeared several weeks after delivery. But there are circumstances preceding delivery, which may operate as remote causes, and from which the frequency of its occurrence, in the puerperal state, may perhaps be explained.

It is an acknowledged fact, that during the last months of gestation, a considerable interruption is given to the return of blood, by the veins of the lower extremities, in consequence of the pressure

sure of the loaded uterus, on the contained parts of the pelvis. The existence of venous plethora, under such circumstances, is proved by the varicous state of the superficial veins, which repeated pregnancies so often occasion. By the laws of the constitution, which it is unnecessary for me to repeat to pathological readers, this state of plethora in the veins, must be followed by increased effusion from the exhalent vessels, and the encrease of exhalation must produce encreased action in the absorbents. In habits pre-disposed to the disease, occasional causes may readily excite inflammation, in a class of vessels thus extraordinarily stimulated. To this consideration we must join another; that much irritability in the lower extremities is evident, in the last months of pregnancy, from the frequency of cramps in the legs, during that period. The objection to this opinion is obvious; that the disease occurs after delivery. But I have shewed that the disease may
exist,

exist, independently of every circumstance regarding parturition, and I do not think it impossible, though at present I cannot prove, that it may take place before delivery. Future observations must decide this question. But the violent pressure on the internal iliacs, and the accompanying veins and nerves, which takes place during delivery, must undoubtedly be considered as a powerful occasional cause of lymphatic inflammation, sufficient to account for the phænomena, without the supposition of a rupture of vessels.

It must also be considered, that the constitution is much more irritable, more liable to febrile and inflammatory complaints, after, than before delivery. The balance of the circulating fluids is suddenly and violently changed; there are new determinations, new sympathies produced, in a state of great debility, agitation, and anxiety. It cannot surprise us, that in circumstances so peculiar, a
set

set of vessels, commonly exempted from inflammatory affections, should take on an unusual disposition.

From these views of the disorder, the method of treatment is easily deduced. As no inflammatory affection of the arterial system exists, and as the inflammation of the lymphatics is a local disease, topical bleeding is evidently best adapted to remove the symptoms; it is a remedy which proved remarkably useful in the case which I have related, and I should expect great advantages from its repeated application, upon any similar occasion that may occur in future. A succession of blisters will be a valuable addition to this course, and it will be proper to exhibit internally, gentle cathartics; perhaps cream of tartar, which appears to operate so powerfully on the absorbent system, in cases of dropsy, may be better adapted to this purpose than most other remedies of this class. By this method, the disease will probably be removed in

two or three weeks, instead of continuing several months, which is the duration generally assigned to it, by writers on midwifery.

There is, as Mr. White remarks (p. 55),* a chronic swelling of the extremities, which resembles the disorder I have been describing. It is also occasioned by irritation given to the extremities of the lymphatic vessels, and it is remarkable, that in the following case of an out-patient of the Infirmary, which I had an opportunity of seeing, by the kindness of Mr. Simmons, the swelling began in the distant part of the extremity, though the irritation commenced at the opposite point.

G——— aged forty, had a cancerous complaint in the left breast; about six weeks before I saw her, she was seized with pains in the arm-pit, striking down

* Inquiry, &c.

the arm, and enlargement of the axillary glands, and soon after, with a swelling of the hand, attended with considerable pain. The swelling rose gradually as high as the elbow, but never went farther. When I examined her, the swelling of the fore-arm and wrist was full, uniform, and not painful. No enlargement of the lymphatic vessels could be ascertained by the touch; and the swelling did not pit on pressure. There had been no considerable change in the state of the limb, during several weeks.

In such cases, perhaps, we see the effect of a degree of disease, sufficient to impede the office of the absorbents, though not arising to inflammation. It is evident, from the preceding remarks, that the lymphatics are liable to active inflammation, more tedious in its progress than a similar affection of the blood-vessels; and it is highly probable, that the absorbent vessels are also liable

to

to the disorder which we denominate chronic, or passive inflammation, which must in them be proportionally more lingering and indolent, than in the sanguiferous system.

In this chronic swelling, external stimulants will probably afford most relief, and I should expect considerable advantages from using a solution of camphor in spirit of turpentine, which I have found remarkably useful in relieving rheumatic pains. A succession of blisters will probably be useful in cases of this nature; but where the complaint arises from a permanent cause, as it did in the instance I have just given, it can hardly be deemed necessary to attempt a cure, till the action of the irritating cause be removed.

In the Transactions of the Gottingen Society,* a case of this disease is related

* Tom. ii.

by Zinn, which deserves to be noticed, because it had a fatal termination. I transcribe it from the first volume of the Medical Museum, p. 335.

“ A woman, thirty years of age, after a difficult labour, having the lochia greatly disturbed by some careless conduct, became much afflicted. Her right leg was seized with an œdematous swelling which extended from the groin to the heel, and enlarged the right labium pudendi. At the same time she was also seized with loss of appetite. Every probable means afforded by the art of healing was tried to remove the swelling, and yet it continued encreasing. Neither diaphoretics, purgatives, nor diuretics, gave any relief; and fomentations and frictions excited more violent pain. An incision was made through the skin of the thigh, that the water might be drained off by an issue, but only a few small drops were discharged by it. The serum received on a piece of linen, had

the

the appearance of jelly, its more liquid parts being resorbed. In the space of two months the patient expired. On dissecting the body, we found some of the inguinal glands scirrhus, greatly enlarged, and surrounding the crural vein, by which its diameter became very much diminished."

Since the former part of this essay was prepared for the press, another instance of this disease has occurred to me, in which I have had the satisfaction of finding the mode of practice I have proposed, succeed completely. The following is an accurate report of the state of the symptoms, and progress of the disease, as I observed them myself.

Jane Waters, of Garden-street, Salford, aged twenty-five, was delivered by an accoucheur, of her second child, December 26th, 1797, after being four days in labour. During delivery, she lay on her left side. Next day, Decem-

ber 27th, she was affected with pain and swelling of the left knee, which descended to the leg and foot of the same side. On the 28th December, the swelling began to rise from the left knee and to affect the thigh; it extended up to the left groin, and labium pudendi. I saw her, for the first time, on the 3d of January, 1798. I found the swelling tense, uniform, not discoloured; that there was a great sensation of rigidity in the limb, and that it was extremely painful on being touched, or moved. She felt exquisite pain in the ham, where I could perceive the lymphatics a little enlarged. The glands in the groin were not affected. She had been costive for several days. I ordered eight leeches to be applied to the left knee and ham, and that she should take two drachms of Rochelle salt, in solution, every three hours, till the bowels should be properly opened.

Next day, January 4th, I found that
the

the leeches had procured a plentiful evacuation. She had also had several stools. The swelling was evidently lessened, and she said that her pain was much relieved.

January 5th, the swelling was considerably abated in the leg and foot, but continued tense upon the thigh. The Rochelle salt was repeated.

January 8th, the swelling of the thigh continued stationary, and gave some pain. Six leeches were ordered to be applied to the thigh, and the cathartic was repeated.

January 9th, the pain and swelling of the thigh were much relieved, but she could not yet use the limb, and the left foot swelled towards evening. She was now very open in her bowels.

January 16th, she had walked about, and attempted to clean out her room
L 4 imprudently,

imprudently, in consequence of which, the left knee swelled again, and became very painful. The thigh, leg, and foot were not at all affected. I directed a larger blister, to be applied round the knee.

January 18th, the pain and swelling of the knee were almost entirely removed; but she was weak, and little able to move.

January 21, the affection of the limb is completely removed. She has no complaint, excepting debility, and a cough, which she had contracted previously to her lying-in.

This case is the more satisfactory, because writers on midwifery acknowledge, that this disease generally continues for several months, under their mode of treatment.

In the course of the summer 1808, the
gentleman,

gentleman, whose case is detailed at p. 132, underwent a similar attack in the right leg and thigh, which had been previously affected by a paralytic stroke. Some unusual circumstances attended this complaint. The leg was extremely tense, but the skin was disposed to inflammation, which took place partially, and at uncertain periods. The swelling extended quite up to the groin, attended with exquisite pain, but it was impossible to distinguish any of the lymphatic vessels or glands, by the touch. But a symptom occurred, which ascertained the nature of the complaint, beyond all doubt. A discharge of pure lymph, without the slightest appearance of ulceration, took place from a scabious eruption on the outer and inner ancles of the diseased limb, and this draining, which was trifling in quantity, but incessant, continued for several weeks. The external inflammation of the skin bore a strong resemblance to the rheumatic efflorescence,

rescence, both in colour, and in the rapidity of its attack and decline.

I urged with great earnestness, the application of leeches to the leg, but it was impossible to overcome the patient's prejudice against them at this time. Mr. White, who attended the case for some time with me, and who was equally convinced that the lymphatic vessels were inflamed, was very desirous that leeches should be applied to the thigh, which was done with some benefit, but the relief was very imperfect. As the frequent recurrence of pain, and the unwieldy bulk of the limb were very distressing to our patient, he at length consented to have an issue set above the knee, which gradually, but effectually, removed the complaint. A complete desquamation of the skin took place, in thick, horny flakes, which it was necessary to detach from their adhesion with the edge of a blunt knife. The progress of the whole disease did not occupy less than

than four months. Warm fomentations appeared to relieve the inflammation of the skin at first, but the best application was found to be a mixture of cerussa with hog's lard.

The following cases, illustrative of this disease, have been supplied by some medical practitioners in this place and the neighbourhood. The first, which proves the existence of this complaint independent of pregnancy, is from Mr. John Egerton Killer, surgeon, of Stockport, a gentleman whose professional abilities, and accuracy of observation, are too well known here to require any eulogium from me.

Mrs. ———, a married lady, aged 53, who never had a child, and though of a delicate constitution enjoyed in general a good state of health, having been fatigued by a journey into the country, and lying afterwards in a bed not perfectly aired, was troubled in a day or two

two with pain and stiffness in the muscular parts of her legs and thighs, attended with some trifling symptoms of fever. This indisposition leaving her, she returned home in the course of the week pretty well. A few days afterwards she exposed herself for several hours to the damp of a room, which had been recently washed, and was seized with shiverings and coldness, succeeded by heat and symptoms of fever, accompanied with acute pain of the hips which darted at times through the pelvis and down the inside of the thighs.

I visited her the next day, Jan. 10, 1802. The pain had entirely left the right thigh and hips, and she complained more of an uncomfortable stiffness and weight in the left leg and thigh, than actual pain, unless the limb was moved which immediately brought on great torture. She informed me there was not the least appearance of swelling or discolouration of the skin. She had a
slight

slight fever, and was costive; took a dose of castor oil immediately, and I sent her a febrifuge mixture, leaving the usual directions as to diet, &c.

Jan. 11. 1811. The patient is now better.

On the 12th I visited her again, she had passed two restless nights, and the seat of the pain was now fixed under the calf of the leg, and she still felt the same uneasiness in the whole limb. As she was confined to her bed, and totally deprived of the use of her leg, I requested to examine it, and found a slight swelling of the foot and round the ankle, without any redness or mark of inflammation on the skin. In the ham the lymphatic glands were enlarged, and gave her great pain when pressed, and were very hard. Upon my offering to run my fingers along the inside of the thigh, she desired me to press very gently, for there were several little lumps under the skin which she could scarcely bear to be touched. These too I found were glands, and I was able to trace the lymphatic

lymphatic vessels from one gland to another, up to the groin where they were also enlarged. Her fever had encreased, and her pulse was quick and hard, though not strong. The oil had purged her smartly. I ordered eight or ten leeches to be applied, a diaphoretic mixture, and low diet. The next day the pain was somewhat abated, the limb was much swelled and tense, and equally painful upon motion or pressure, though ever so gentle. The medicines and regimen were continued.

14. The swelling and pain encreased, and extends to the labium pudendi. Apply the leeches again, and continue the antiphlogistic treatment.

15. The limb so much swelled, there is no possibility of distinguishing any of the glands, very tense, shining and colourless. She cannot bear to have it moved in the most careful manner. Fever continues.

16. Much

16. Much the same as yesterday.

17. The pain and fever much abated, the swelling remains stationary. I ordered the anodyne fomentation to be applied twice or thrice a-day, which gave her great relief; and the next day could bear it to be rubbed with Lin. sapon. These applications were used till the 24th, without gaining much advantage over the swelling. when I ordered a large blister to be applied on the inside of the thigh; a more generous diet was allowed, a grain of calomel and opium was given every night, and a Julep with the Sp. æth. vitriolic, during the day. In a few days the swelling began to diminish gradually, along the shin and about the ancle it yielded to the pressure of the finger, and the impression remained a short time. The glands in the groin and inside of the thigh remaining enlarged, two more blisters were applied, the fomentation and liniment were continued, without
any

any alteration in the medicines, to Feb. 5th, when my patient, who had been much reduced had gained strength enough to walk without assistance. A bandage was applied to the leg, which still continued to swell in the day: tonic medicines and liberal diet, completed the cure in the course of a few weeks.

During my practice here, I have met with three other cases of the same disease, two after child-bed, the other succeeded an abortion. As I did not take notes at the time, I could only give you the cases from recollection. The leading symptoms, however, were the same as in the one related, and the cases varied only in the violence of the disease, and were all cured by the same treatment, I pursued in the inclosed case. From every observation I have been able to make upon this disease, I am fully convinced, that inflammation of the lymphatic vessels is the cause of it, and that the plan which I have followed will afford the speediest

speediest cure. During my long residence at the Infirmary, I had an opportunity of seeing this complaint very differently treated, and was frequently a witness to its long continuance, obstinately withstanding the method of cure in use at that time."

The next case was communicated by Mr. Ogden, surgeon, of Ashton-under-Lyne, a most respectable and experienced practitioner. In this instance, the common mark of inflammation of the superficial lymphatics was visible, along with the corded, and knotty swellings which denote the irritation of the principal trunks.

" Betty, the wife of Joseph Howard, of Denton in this neighbourhood, aged 25 years, was delivered on the 30th ult, of her third child, after a rather tedious and hard, natural labour. She recovered so well and so fast from her confinement, that I saw her on Wednesday last, the

9th inst. following her usual domestic employments, without any complaint whatsoever. The same night, however, she perceived a soreness in the upper and inside of the left thigh, which was soon attended with an enlargement and inflammatory discolouration of the part affected; exhibiting an appearance (to use her own expression) as if the stroke of a whip had been inflicted on it. The pain, swelling, and redness descended gradually to the knee, and then along the inside of the leg. I saw it to-day for the first time. The seat of the complaint is just now in the calf of the leg, which is enlarged in its whole circumference; but on its inside there is a prominent, inflamed ridge, and which the patient has no doubt will be continued to the foot. The swelling and redness in the thigh are now scarcely observable; but on running my hand along the inside of the thigh, a sort of cord, with many small, hard, knotty inequalities is perceptible to the finger
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in the course of the lymphatics, and which is still very sore when pressed. My patient had not been confined at all to her bed by this affection; she has taken no medicines for it, and the only application which she has made use of is a large, loose flannel around the parts affected.

It may be proper to inform you further, that my patient has had this complaint after each lying-in; the first time in the left thigh and leg, the second time in the right, and now in the left again; it has always come on in the second week after her delivery, and each time the symptoms and progress of it have been the same; but less violent and tedious on the present, than on the former occasions.

July 20. I have seen her again to-day. The redness and swelling in the calf are nearly gone. The foot is rather swelled, but much less so than hereto-

fore: and taking the complaint as a whole, she considers it less severe than before. The lymphatic cord is still sore when pressed; is still much enlarged, hard and knotty. But my patient has no doubt of soon recovering her usual good health."

The next case was communicated by Mr. Banks, surgeon, of this place, a gentleman on whose accuracy and discrimination I can place the utmost dependence.

"Mrs. B——, aged twenty-one years, of a lax fibre, was delivered, June 17, 1800, of her first child. Her labour was natural, and in the language of medical men, easy; she resided at the distance of four miles from Manchester, which prevented me from seeing her again until the third day, when I had the happiness to find her doing well, the changes in the circulation peculiar to her situation having taken place with great

great regularity. She had a plentiful secretion of milk, the lochia was natural in quantity and quality; her skin soft and free from morbid heat, she had had one motion; the evacuation of urine was natural. Her recovery proceeded without interruption until the 28th, when she was suddenly attacked with pain in her right groin, ham, and calf of her leg, which she imagined was rheumatic. She formed this opinion of her complaint in consequence of having suffered severely from a rheumatic fever, two years before. I received information of her indisposition early the same day, and ordered for her a purgative draught to be taken directly, and a sudorific draught after the bowels were evacuated. As she was not relieved by the medicines she had taken, I was desired to see her on the 30th; she now complained of the pain affecting the whole of the thigh, and a great part of the leg; the parts most pained were the groin, the ham, and the inside of the calf of the leg. The pain in

the ham was much encreased when she attempted to extend her leg; the thigh was considerably swelled, the leg was nearly in the same state, nearly as low as the ankle, the tension of the whole limb was moderate in proportion to the degree of swelling. The skin had the white and shining appearance peculiar to the disease, the superficial lymphatics on the inside of the calf of the leg were much enlarged and painful when touched, I could trace the enlargement nearly to the ham; in the ham the enlargement was much more evident, and might easily be followed two or three inches above; her pulse was soft, and ninety, the skin was covered with a copious perspiration, and continued in that state five or six days, attended with little encrease of heat, the lochia had gradually disappeared, her bowels were regular, and the evacuation of urine natural, the tongue was covered with a thin white crust. She remained in nearly the same state until the ninth of July, from that time

she

she experienced a gradual diminution of the disease; she did not obtain a complete removal of the complaint until three weeks or a month had elapsed. The leg and foot were free from Œdema in every state of the disease.

The treatment consisted in purgative doses of calomel, opiates, blisters, and sedative fomentations.

In the year 1792, I attended Dr. Lowder's lectures on Midwifery. At that time he delivered his opinion of the disease in the following terms. "It generally attacks the belly, and goes along the lymphatics of the whole extremity or extremities; observing the following course, from the belly it proceeds to the groin, labia pudendi, and thigh, the thigh swells and is painful, sometimes the swelling pits; in some cases abscesses form, in most cases however the patient gets well; sometimes when the disease begins to disappear in the limb first affected,

“affected, it attacks the other ; in some
 “instances both extremities are affected
 “at the same time. I have seen this
 “disease affecting the upper extremities.

“The cause of the complaint is not well
 “known. Mr. White, of Manchester,
 “thought it was owing to a rupture of the
 “lymphatics, from the pressure of the
 “Foetus’s Head during labour. This opi-
 “nion I do not assent to, as it frequently
 “happens after easy labours, and some-
 “times affects the upper extremities. The
 “Dr. divides the disease into the acute and
 “chronic. The acute is marked by the
 “pain and fever being much greater.
 “The treatment in this form of the disease
 “consists of venæsection in strong constitu-
 “tions, purgatives, diuretics, and opiates
 “internally; externally, blisters and fo-
 “mentations. In the chronic, he trusts
 “solely to diuretics, and advises the use
 “of Seltzer-water with old hock or cyder.”

About the same time, I received the

the following communication from Mr. Simmons, Surgeon, of this place.

“ Rachael Aldred, a single woman, forty-five years of age, was seized in April 1800, with alternate heat and cold, and other symptoms of fever, without any assignable cause. On the fourth day from the seizure, she felt a pain on the inside of her left leg just below the knee, which shot outwardly across the tibia in the course of the absorbents, and terminated the feverish attack. Next day, the pain became more fixed in the part first affected, and from it a swelling extended downward over the whole limb to the instep, but without any discolouration, though painful to the touch, and renitent on pressure.

She gave this account of herself when admitted into the Infirmary, under my care, ten days after; at which time the topical affection had not undergone any material change, the pulse was not accelerated,



celerated, nor were the inguinal glands at all affected.

Viewing it as a local inflammatory affection, I directed half a dozen leeches to be applied below the knee, where the hardness was greater, and more defined; and, to the whole limb, the anodyne fomentation twice a-day, and afterwards to embrocate with camphorated oil; and, for medicine, a solution of neutral salts every morning, in doses sufficient to procure two or three evacuations in the course of the day.

The leeches gave immediate ease, which was followed by a daily abatement of the complaint. But as the tension subsided, the limb became œdematous; therefore the fomentation was discontinued, and a liniment substituted, composed of equal parts of aq. ammon. acetat. & liniment. sapon.; and a bandage was directed to be applied mode-

erately

rately tight from the toes up to the knee, after each friction.

By the use of these means, the disease disappeared in a fortnight, when she was discharged cured; with instructions to wear a roller for several weeks longer, and to renew it a-fresh every morning."

The last case which I shall produce is particularly interesting, because it is distinctly related by the patient himself, Mr. Bellott, surgeon, of Oldham.

"On the 25th of February, 1807, after a long confinement of a typhus fever, in rising from the sofa to retire to bed, I was suddenly seized with a pain in the groin, just on gaining the erect posture; the sensation was as if something had been ruptured, the pain followed the course of the lymphatics, down the thigh, and kept encreasing every step I took till I reached my bed-room; the pain was then got down to the calf of the leg, and was exceedingly

exceedingly violent whilst the leg remained pendent, but became rather easier when laid down : it afterwards gradually encreased ; about three o'clock in the morning the leg and thigh were examined, and were found to be very much swelled ; in the morning the swelling had encreased, the swelling appeared of a very peculiar nature : it was exceedingly hard and tense, not leaving any mark or indentation upon pressure being made with the finger ; there was no inflammation upon the skin, yet the limb felt rather hot ; the pain was chiefly confined to the calf of the leg, and was most excruciating. Æther and Laudanum were applied, and also anodyne fomentations, but these afforded no relief : no moisture was induced upon the skin by the fomentation ; and sometimes I thought the pain was encreased by it. On the third day I determined to have leeches applied to the calf, which afforded some relief. In little more than a week

a week the thigh began to subside, and the lymphatic vessels, which were considerably enlarged, might easily be traced along the inside of the thigh. The glands in the groin were swelled and very painful to the touch, or upon being moved; the hard swelling gradually subsided, and in about a fortnight was gone. The leg afterwards became oedematous, and continued so for several weeks, this was in a great measure reduced by bandages. The extremity is larger than the other now, and shews a little œdema in the evening."

This collection of facts may serve to elucidate the nature of a disease, which obstetrical writers have erroneously supposed to be exclusively connected with the puerperal state. I think it is now proved, by a sufficient body of evidence, that swellings of the lower extremities, from obstructions in the lymphatic vessels, may be produced by cold, or by
general

general fever, in both sexes; that the appearance or absence of inflammation of the external integuments depends on the more or less superficial situation of the obstructed vessels; that the enlargement and induration of the lymphatic trunk and glands can sometimes be demonstrably traced by the hand, but not invariably; and that topical bleeding mitigates the symptoms, and shortens the disease. Future observations must decide, whether these distinctions are sufficiently characterized to constitute different varieties, but I feel no difficulty in referring the symptoms to one species of oedema, which may be termed, *Oedema lymphaticum*.

After the publication of my first cases on this subject, I found that Dr. Willan had noticed the peculiar state of the lymphatic vessels, in the puerperal oedema, in his valuable reports. He says; “The inguinal glands are, at first,
“ sometimes

“ sometimes enlarged and painful: the
“ lymphatics may also be traced along
“ the limb, being hard and corded. A
“ considerable number of leeches applied
“ to the groin, and upper part of the
“ thigh, at the commencement of the
“ disorder, in many cases relieves the
“ pain, and seems to prevent the sudden
“ enlargement of the limb.” *

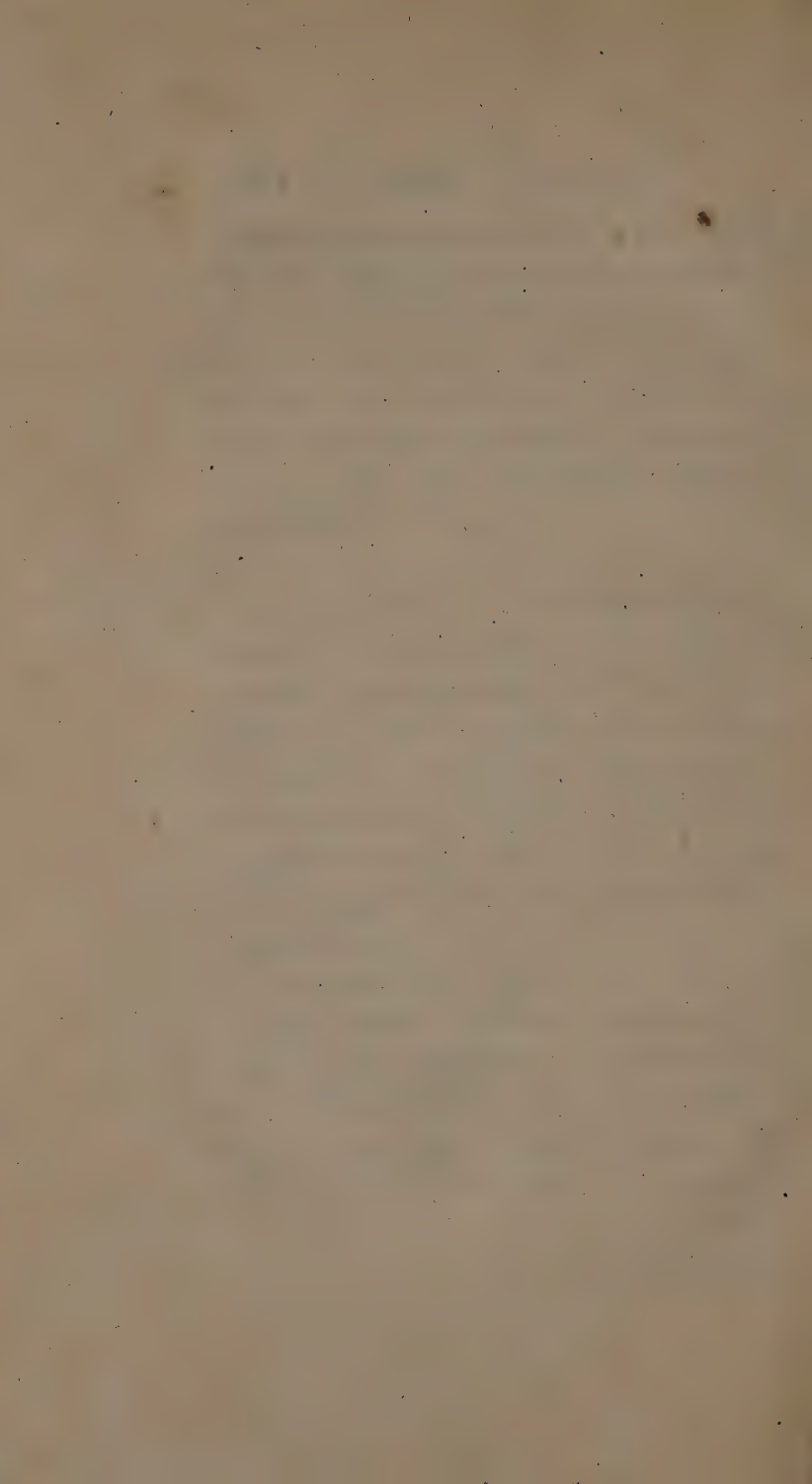
From Dr. Willan's well-known accuracy, this plain statement of a morbid appearance, without reference to any theory, affords a strong support to my observations. That the lymphatics of the diseased limb are enlarged, hardened, and in a state of violent irritation, are not matters of conjecture, but facts ascertained by the touch, and by the patient's complaints of extreme pain in the course of these vessels, and in the

* Willan's Reports on the diseases in London,
p. 325. A. 1800.

places of the glands. This curious state of the lymphatics can seldom be discovered, when the swelling is completely tense; it can only be felt on the first tendency to enlargement, or after the tumor has begun to subside. From this cause, it may have frequently escaped observation.

A few years ago, I met with a singular instance of a fatal disease, occasioned by a general enlargement of the conglobate glands on each side of the neck. Each gland formed a small indurated tumor, but the affection being general, from the under-jaw to the clavicle, the whole mass formed a large tumor on each side, compressing not only the blood-vessels, but the oesophagus and trachea, so as to produce extreme difficulty both in deglutition and respiration. When mucus was collected in the fauces, the dyspnoea amounted to agony, and the patient, at last, died of suffocation. He was an elderly

elderly man. The whole progress of the disease occupied about six months.



OF THE CROUP.

OF THE CROUP.

IT is of great importance, to form an accurate opinion respecting the treatment of this disease, which is very short in its duration, and attended with extreme danger. Some modern writers have endeavoured to introduce distinctions, which are not warranted by any cases that I have met with, and I apprehend, that practitioners have been often diverted, by the suggestions of those authors, from the only effectual method of cure. It has been my lot, not only to have met with several instances of this disease in practice, but to have undergone it repeatedly in my youth, and to have seen a great deal of it in my family. I shall, therefore, de-

scribe it from my own observation, and shall explain the practice which I have invariably found to succeed, when employed sufficiently early in the disorder.

Some days before the appearance of the croup, the child is fretful, inactive, and drowsy: the eyes are somewhat suffused and blood-shot, and the complexion is muddy, or rather livid. There is some degree of cough, which generally resembles that attending a common cold, but sometimes has the peculiar shrill sound, even from the first. This cough, in the course of two or three days, becomes violent and troublesome, and it is then necessary to watch the patient, with great attention. The dangerous attack is commonly made in the night, sometimes soon after the child is put to bed, but more frequently about midnight. The cough, on the approach of danger, has a shrill, barking sound, and returns in redoubled fits, the first of which, though very violent, is succeeded

in

in a few minutes by a second, longer, and yet more violent. Every fit of coughing agitates the patient, to an extreme degree: the face is swelled and flushed; the eyes are protruded; a general tremor takes place, and there is a kind of convulsive struggle to renew respiration, at the close of each fit. There is no expectoration, at this period of the disease. As the complaint increases, the coughing fits are sometimes more troublesome, sometimes they become less frequent; but an incessant difficulty of breathing comes on, accompanied by swelling of the throat, about the place of the larynx: the head is thrown back, in the agony of attempting to escape suffocation, and the whole extensors of the trunk, and of the legs, are sometimes thrown suddenly into action, to assist the effort, so that the whole body is bent backwards, as in tetanus; in this attitude, and in this effort, the patient expires. I once attended the inspection of a fine boy, who had died

of the croup, and I observed, his struggles had been so violent, that the corpse rested, in a great measure, on the hind head and the heels.

There is not only an unusual sound produced by the cough, something between the yelping and barking of a dog, which it is impossible to describe, but respiration is performed with a hissing noise, as if the trachea were nearly closed up, by some light, spongy substance. The expression of the countenance is also appropriate, and will alone betray the disease, to an experienced observer. There is much distention, the bloom of the cheeks is greatly heightened, the eyes are swelled up, watery, and exhibit great signs of suffering. The trembling, hurry, and restlessness, though accompanied with heavy sleep, proceed to an excessive degree as the disease advances, and the heart and arteries are thrown into violent palpitations. Respiration becomes more stridulous,

dulous, is repeated at longer efforts, and with greater exertion, till it ceases entirely. Spontaneous vomiting sometimes comes on, in the course of the disease, and a quantity of viscid mucus is discharged, but without much relief. Children who are subject to attacks of the croup, are sometimes seized with the deep, barking cough, which will increase to such a degree as to create much alarm, about the usual time of the dangerous exacerbation, yet it will decrease again, and at length go entirely off, without any other remedies than common demulcents. Cases of this kind, I suspect, have been described as genuine paroxysms of croup; and very trifling methods of cure have been recommended, in consequence of their apparent efficacy in the spurious croup, which always cures itself. The diagnosis of this particular case, is to be drawn from the following circumstances.

1. In the spurious croup, the cough has

has not the shrill, whining sound, which marks it in genuine cases. It is hoarser, and the intervals are longer.

2. Respiration is not so much affected in the spurious croup, even when the cough becomes alarmingly violent; and the obstruction does not produce the sibilation peculiar to croup, but resembles more a common dyspnoea.

3. The spurious croup is not attended with the restlessness, trembling, and palpitation of the arteries, which characterize the other.

I must observe, however, that these distinctions are only to be learned, from much attention to the different cases of the disease; for the sound of the cough is so similar in both, as to inspire even the most experienced with some degree of doubt. I have sat by the child's bedside repeatedly, watching for the moment of danger, while the cough was
encreasing

increasing in violence; and have been only undeceived, by finding that no tremor or palpitation came on towards midnight, that the restlessness abated, and that sleep seemed to become more composed.

I have seen children affected with this disease, almost at all ages, under nine. In large families, if one child is seized with croup, most of the others generally begin, about the same time, to have symptoms of the spurious croup. I have never found reason to believe it infectious, and it appears very doubtful whether the disposition to it be hereditary. I have known it appear in families, to whom the symptoms were totally new.

The course of the genuine croup is very short. If the alarming symptoms which I have described, are not mitigated during the first six hours, the disease will generally prove fatal. It has happened

pened several times, that I have been called, early in the day, to patients who had become seriously ill, only on the preceding evening, and in such cases I have only succeeded once. The proper time for administering relief, is when the cough, dyspnœa, and palpitation encrease, towards ten or eleven o'clock in the evening.

There can be no doubt, that the genuine croup is a disease highly inflammatory. In two cases, where dissection was permitted, I found the internal surface of the trachea, near the larynx, affected with the most violent inflammation. The membrane, so much talked of by the first writers on this disease, appeared, in both of these dissections, to be nothing more than inflammatory exsudation; it was observable in its different stages, as the inflammation had run down the surface, from a consistent substance at the upper part, capable of being pulled and torn, to the form of a
purulent

purulent fluid, recently effused. If any other proof of the nature of the disease were wanting, I have received it in another manner, by seeing croup supervene, as an accessory disease, in two cases of ulcerated sore-throat. There had been little general fever, and there was no scarlet eruption, in either case. Though there were large ulcerations in the tonsils, there was, at the same time, vivid inflammation of the fauces. There was nothing uncommon in the symptoms, till the inflammation extended to the trachea, when faint, shrill coughing, hissing respiration, and restlessness came on, which were soon followed by death.

In a singular instance, I have seen pneumonic inflammation converted into croup. The inflammation had subsisted during ten days, in a boy about seven years of age; the acute pain in the side was relieved, but the pulse continued very rapid, though not quick, there was a considerable degree of dyspnœa, and

and the cough was frequent, with a pretty copious expectoration. On the morning of the tenth day he complained of pain in his throat, and in the afternoon, the cough began to assume the crouping sound. Leeches were applied to the throat, which produced a free discharge of blood, with an evident mitigation of the cough and dyspnoea. An attempt was then made to excite vomiting, by emetic tartar, but, though given in large doses, it run off by the bowels. Next morning the cough was nearly gone, expectoration had entirely ceased, the respiration was hissing and difficult, and the pulse began to flag. Under these circumstances, it was thought necessary to stimulate the stomach in the most powerful manner. A grain of blue vitriol was given in solution, and as it produced no effect, seven grains more were successively exhibited, in the course of the day. No vomiting followed, and suffocation took place, in the general, fatal course of the disease.

In

In all the cases of croup which I have seen, I have found it necessary to bleed immediately, and when I have seen the patients sufficiently early, to entertain hopes of saving them, I have directed the evacuation to be continued, so as nearly to produce fainting. This is the essential point of the cure, without which no relief can be effected. Even if the patient should not be seen, till the day succeeding the attack, it is proper to bleed *ad deliquium*, if the subject be plethoric, and the difficulty of breathing and restlessness be great.

A large bleeding generally produces an instantaneous abatement of the symptoms; but this is not sufficient for the safety of the patient. A blister must, at the same time, be applied to the breast, or between the shoulders, and ought to be made larger than usual. In the case of very young children, we must almost despair, for it is extremely difficult to procure any blood from them

them by the lancet, and leeches afford a very inadequate mode of depletion. Children above two years of age, may have blood drawn from the hands or feet, in tolerable quantity. The operator must not be nice, respecting the appearance of mangling, in circumstances so dreadful.

When the debilitating effects of the bleeding are over, the blister being applied, it is next necessary to exhibit a vomit. I generally use tartar emetic, in the usual doses, till full vomiting takes place. Considerable quantities of ropy mucus are thus brought off. I have never seen the inflammatory exsudation vomited up, in the form of a membrane. Yet in the event of a decrease of inflammation, in the lower part of the tube, I cannot conceive, that there should be any difficulty in its being voided, either by vomiting or expectoration, excepting in some few cases, where the inflammatory exsudation acquires the consistence of a membrane,

membrane, even in the branches of the bronchia. On the second day of the disease, from the approach of insensibility, it is sometimes very difficult to promote vomiting. I remember, in one case, to have given, after large doses of ipecacuanha and emetic tartar, three grains of blue vitriol, before vomiting could be excited. The case was nearly desperate, for every effort to inspire, threatened suffocation. The irritability of the stomach was at length roused; much viscid mucus was discharged, and the child recovered.

If the first bleeding and emetic do not effectually relieve the cough, and difficulty of breathing, it becomes necessary to repeat the bleeding; and the evacuation in this case must again be carried as far as the patient's strength will permit. A repetition of the emetic, after the second bleeding, often puts an end to the disease; but if this should

fail, we have nothing to hope from medicine.

The use of the warm bath may be very properly interposed, between these processes, and demulcents may be thrown in, to relieve the patient's sufferings, but I am convinced, that no other method, than the vigorous one which I have described, is capable of curing a genuine case of Croup.

I have endeavoured to place this matter in a stronger point of view, because many lives have been sacrificed to the imaginary powers of asafœtida, or small, repeated doses of antimonials, from unfounded theories, of spasmodic constriction attending the disease. On the contrary, I conceive the Croup to be as truly inflammatory, as pleurisy or peripneumony, and not to be more remarkably accompanied with spasm, than those affections.

The

The operation of bronchotomy has been proposed, as a last resource, in the advanced state of Croup, but I believe, from what I have seen in dissections, it would be completely useless. The upper part of the hardened membranous substance might be extracted, with the forceps, but the fluid portion, which fills the lower part of the trachea, and the bronchia, and which could not be removed, would still occasion a powerful obstacle to respiration, and the inflammation, still existing, would certainly not be diminished by the operation. In those cases where the membranous matter was discharged, (of which Dr. MONRO of Edinburgh has some very remarkable preparations) it seems probable that relief was found, because the inflammation of the trachea had terminated, with the first effusion. But in both the cases which I have seen inspected, it was evident that the inflammation was extending rapidly, though effusion had taken place long enough, to present the mem-

O 2 branous

branous appearance, in the upper part of the tube.

In the unfortunate circumstance, of the Croup's supervening to the ulcerated sore-throat, from the extension of inflammation to the trachea, it is extremely difficult to direct our practice, and if the symptoms of Croup run high, it becomes scarcely possible to save the patient. To discontinue the bark, while the ulcerations are gaining ground, would be to devote the patient to certain death; and general bleeding is expressly prohibited by the same circumstance. Large blisters to the throat, leeches, and repeated emetics, are the only means of relief reserved to us; and I must own, that I have found them ineffectual, in this perplexing coincidence.

OF THE
HOOPING-COUGH.

OF THE HOOPING-COUGH.

THIS is a disease, which has been too little studied. Authors afford nothing satisfactory, respecting its duration or its cure. It has been too much trusted to the management of nurses, and has been empirically treated, even by those physicians, who have applied themselves to the particular consideration of the complaint.

We labour, indeed, under great disadvantages in this investigation: a contagion which escapes our senses; which produces but temporary convulsions, by its proper action; and that exhibits to the dissector, nothing but marks of the
O 4 violent

violent commotions which it occasions ; a disease varying in its symptoms, with age, with temperament, and by its combination with other disorders, present uncommon difficulties. I do not pretend to give a complete view of the subject, but I shall mention some circumstances, which I have found particularly necessary to be observed, in my own practice.

The hooping-cough appears at first, under a variety of forms ; sometimes as a common catarrh, sometimes as a general fever, accompanied with a cough, and sometimes, though rarely, it assumes the form of pneumonic inflammation. It appears to combine with other diseases, more readily than any other complaint produced by specific contagion, and in the following remarkable case, I found it, after being nearly lost in combination with one of the most powerful exanthemata, recruit its forces, and extinguish the supervening disease.

Miss

Miss ———, aged one year and a half, had the hooping-cough, in a slight degree, for some weeks. When it seemed to be leaving her, she was seized with the measles, and there was an appearance of a very large crop of the eruption. Her cough was not very troublesome, and no longer resembled the hooping-cough. On the third day, she was seized with an extreme degree of dyspnœa, and a short harrassing cough, and the eruption almost entirely disappeared. The pulse became innumerable. Leeches were applied to the extremities, blisters were applied to different parts of the body, and every method was used to renew the eruption, but without success. The cough encreased, but the dyspnœa began to relax, and at length, to my great satisfaction, the type of the hooping-cough was renewed, and my patient recovered, by time, and change of air. Not one spot of the eruption of measles ran its usual course.

The

The cough generally continues, without much encrease, for some time, even after it assumes its proper type; and it seldom reaches the greatest degree of violence, till the second or third week. The length of this period depends on the age, and strength of the child; the younger, and more robust, suffer more early, and more severely, than others. A thick expectoration, of a purulent appearance, comes on, when the fits of coughing become frequent: it varies in quantity, in different cases, and is rather vomited, than coughed up, at the close of the fit. I have known the fits return every ten minutes, during the night. In this state, the patient crows, in making a short inspiration, while the cough is suspended for a moment, and the extreme agitation of the lungs, and of the alimentary canal, sometimes produces a discharge of blood, both upwards and downwards. A great degree of flatulence prevails in the stomach and bowels, during this stage, and the paroxysms of

of coughing are accompanied with loud croaking in them. Thus the disease proceeds, till the patient's strength is reduced to the lowest degree, consistent with life. Recovery takes place very slowly, by a gradual abatement of the symptoms, and a tardy return of strength. A very frequent pulse, quick at the beginning, but towards the height of the disease, small and thready, attends the complaint in its whole course. This constant degree of fever sometimes destroys the patient, by its continuance; sometimes, death seems to be occasioned by effusions of blood, into the head, or lungs. Nothing can be more uncertain, than the duration of this disease. Even after it appears to have entirely ceased, a slight exposure to cold will renew it with considerable violence; and accidental coughs, for some time after its disappearance, partake of the sound of the hooping-cough.

This disease is said to have been cured,
by

by almost as great a variety of remedies, as intermittent fever. Bark, cicuta, tincture of cantharides, are all recommended by the experience of some practitioner. I believe that they may all have succeeded equally, for they have generally been tried about the height, or in the decline of a disease, which in most cases will cure itself. The only question is, whether it be possible to cut short the progress of Hooping-cough, or whether it must be left to run its course.

In the beginning of the disease, when it is accompanied by symptoms of fever and inflammation, bleeding is sometimes necessary. Blisters are more frequently necessary, and Dr. Armstrong's plan of exhibiting tartarized antimony, in doses which prove gently emetic, is undoubtedly very useful; chiefly, perhaps, by supplying the means of expectoration, to very young children. But after these preliminary steps are taken, I believe that the only remedy, which promises
to

to shorten the disorder effectually, is the solution of white arsenic. I have employed this medicine, in several cases of Infirmary patients, with tolerable success; and I have occasionally given it in private practice, with so much advantage, that I think it deserving of farther trials. The dose with which I generally begin, is one drop daily, for an infant; and for children under seven, two drops, repeated according to the state of the symptoms. It requires some caution, to avoid the accumulated action of this medicine. The exhibition of the solution should be suspended occasionally, for a day or more, and the bowels should be gently opened, by means of a little calomel.

The state of the bowels should be carefully attended to: for, in some instances, astonishing accumulations take place, in very young children, and become sources of fever, independent of the original disease.

The

The beneficial effect of the limestone soil in Derbyshire has long been known to the old practitioners of this town, in the cure of hooping-cough, and I have had an opportunity of verifying it in some very striking instances. If the climate of the Peak were milder, I am persuaded that many cases of spasmodic asthma might be relieved by residence at Buxton: it is a well-known fact, that broken-winded horses are free from their complaint, while they remain there. This may be attributed in some degree to the quantity of lime which the brooks hold in solution; and in some measure to the impregnation of the atmosphere, from the numerous lime-kilns in the neighbourhood.

OF THE USE OF THE
NITRIC ACID, IN SYPHILIS,
AND SOME OTHER DISEASES.

OF THE USE OF THE NITRIC ACID, IN
SYPHILIS, AND SOME OTHER DISEASES.

EVERY practitioner who has had much experience in syphilitic complaints, must have found reason to regret, that in certain stages of those disorders, mercury ceases to produce any salutary effects, and that it even aggravates the patient's sufferings, by the peculiar symptoms which it occasions. Cases of this nature have been more frequent, since a practice was introduced of patching up syphilitic disorders, by slight courses of mercury, just sufficient to subdue the first symptoms, but unequal to the eradication of the taint. The advocates for mitigating the old method of salivation, carried their opposition to excess, as it

generally happens in matters of controversy, and having begun by shewing, that their adversaries had administered too much mercury, they finished by advising an exhibition, which experience has shewn to be too small. I have met with several cases, in which the bones have been attacked, some years after the patients had been declared to be sound, by practitioners of reputation; and having felt the irksomeness of a conjuncture, in which I could neither relieve my patients, nor satisfy myself, it gave me great pleasure when the nitric acid was announced, as a remedy adapted to such disastrous situations.

Since Mr. Scott's account of its application with this view, was published, I have employed it in a variety of cases, both in private, and hospital-practice, and I shall now offer to the public the result of those cases, which appear to me conclusive.

1. Eliz.

1. Eliz. Johnson, a middle-aged, married woman, had been infected by her husband, nearly three years before she came under my care. As she did not for a long time suspect the nature of the complaint, mercury had not been fully employed, till within a short period previous to her admission into the hospital. She had constant pains in the head and limbs, when I saw her; nodes on the shin-bones; a large ulcer on the crown of the head, and some smaller ulcers on the thighs; she was weak, much emaciated, and had a considerable degree of hectic fever.

She informed me, that she had undergone a complete mercurial course, a few months before she came into the hospital; however, that I might ascertain, beyond all doubt, whether the disorder was still within the reach of mercury, it was thrown in, under my own inspection, and opiates were administered at the same time, in sufficient quantities

to prevent it from running off by the bowels, till her mouth became very sore. Though she was in no respect relieved by this process, I thought it right to support the soreness of the mouth for some little time, till it was apparent, that nothing was to be expected from its continuance. The mercury was then omitted, the patient was put on a course of bark and opium, and when the mercurial symptoms disappeared, I sent her to her home, which is in an airy situation, within a few miles of Manchester, and, as a last effort, directed forty drops of the diluted nitrous acid to be taken in water, four times a-day. She was now confined constantly to bed, and I expected a fatal termination of the disease. The ulcerations had never been affected, in the slightest degree, by the mercurial course. During several weeks, no change took place: the dose of the medicines was in the mean time gradually increased, till she came to take a drachm of the diluted acid four times a-day. I was then

then informed, that the ulcer on the crown of the head was healing, and that she was recovering strength.

I received no distinct account of her, till near four months afterwards, when she was able to walk to the Infirmary. The ulcer on the head was then completely healed, and her pains had left her almost entirely. She had not, by her own confession, been very diligent in using the acid; she said, that she thought it disagreed with her bowels, and that she had discontinued it three months; that she had afterwards taken sarsaparilla; and that there was no alteration, either in her pains, her weakness, or in the size of the ulcers, before she gave up the use of the acid.

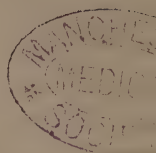
2. A. B. a person between thirty and forty years of age, irregular in his manner of living, applied to me, on account of an ulcer on the under side of the penis, which I considered as a chancre,

P 3 but

but which he would not believe to be venereal. On examination, I found that he had slight ulcerations in the tonsils, copper-coloured eruptions, and nocturnal pains. He had observed the ulcer, for more than two months. I put him on a mercurial course, and when his mouth became pretty sore, the symptoms gave way, and the chancre was healed. I urged the necessity of continuing the course for some time longer, but he was disgusted with his medicines, and discontinued them. I heard nothing of him for four or five months, when he returned to me, with his face and head overspread by venereal eruptions, and complaining of great heat in the nose, and pains over the orbits. I found, on examination, the membrane lining the nostrils deeply inflamed, and small ulcerations formed on the lower part of the septum narium, on each side. I thought it necessary, from these appearances, to intimate the possibility of his losing a part of the nose, especially if I might depend

depend on his solemn assertion, that he had not been exposed to fresh infection. Mr. Scott's account of the nitric acid had not then appeared, and I had no choice respecting the remedy. Mercury was again administered, and it again removed the symptoms, after a considerable degree of soreness had been kept up in the mouth, during nearly three months. When relief from his sufferings was thus obtained, he became once more unmanageable; complained of the constant inconvenience, resulting from the affection of his mouth; feared that the mercury would *get into his bones*, according to the vulgar opinion; and at last withdrew himself entirely,

At the expiration of a year and a half, he applied to me again, much altered in his appearance, and convinced, too late, as I feared, of his error in relinquishing his medicines prematurely. He had now incessant, racking pains in his head and limbs; a node was formed on



the left tibia; and he had a frequent, thin discharge from the left nostril, attended by pain, about the situation of the ethmoid bone, in the left orbit. On blowing his nose, he sometimes discharged portions of a fleshy appearance, from that side, and every discharge of this nature was succeeded by a painful sense of rawness, extending up to the orbit, and an extreme sensibility on the admission of air in inspiration. He expressed the strongest desire of relief, but begged, that if it were possible to remove the disease otherwise, he might take no more mercury. He was much emaciated by pain, total loss of sleep, and anxiety of mind. His appetite was almost entirely gone. After representing to him the small chance of a cure which he had left himself, and the necessity of steadily observing the plan which I should lay down, I directed him to take the diluted nitrous acid, beginning with thirty drops, four times a-day, and taking half a grain of opium, every

every night, or occasionally in the day, according to the state of his bowels. A blister was applied immediately, to the node on the left leg. Under this treatment, the pains in the head and legs abated, so as to restore the patient to tolerable ease, in the course of three weeks; and the node disappeared; but the pain in the orbit, and fleshy discharge from the nostril seemed rather to augment. There was no soreness of the mouth. He now felt great weakness in both thighs, which were considerably shrunk, and was much troubled with a dull aching in them, which he had not perceived, till the acute pains in the legs left him. By this time, he had encreased the dose of the acid to fifty drops, four times a-day, and it began to affect his bowels, though it was joined with considerable doses of opium. I therefore proposed to him to resume the use of mercury, which had always produced the happiest effects on his constitution. The mercurial course was
then

then entered upon, by giving five grains of the mercurial pill, night and morning, and in a few days after, he discontinued the use of the acid. All his symptoms were removed, soon after the mercury affected his mouth.

3. David Jones, was admitted an in-patient, June 27, 1796, for a rheumatic complaint, which had entirely deprived him of the use of the lower extremities. There was some appearance of distortion in the spine. He took diaphoretic medicines, and opiates, and had caustics applied to that part of the spine, which seemed to be incurvated. A few days after his admission, on his informing me that he had had a venereal complaint, which he thought had never been completely cured, I ordered him a few grains of calomel, every night, at bedtime; but as no relief was obtained by this, or the other remedies, and as the disease assumed more of a paralytic form, they were discontinued, and he was ordered

ordered to take our *infusum stimulans*, an infusion of horse-radish and mustard-seed. He continued to be confined to bed, without motion in the lower extremities, having blisters occasionally applied, till January 24, 1797; the issues having been permitted to heal up. I then ordered him forty drops of the dilute nitrous acid, four times a-day, which, on the 13th February, were encreased to a drachm, four times a-day. Under this course he began gradually to recover; he was enabled to walk about with little difficulty, and on the 27th February, he was well enough to be made an out-patient. He has since, completely regained the use of his limbs.

4. William Brown, was admitted an in-patient, January 23d, 1797, with a sciatic pain in one thigh, which obliged him to walk upon crutches, and sometimes disabled him from moving at all. The part affected, was blistered repeatedly,

edly, and he took the tincture of guaiacum daily, with occasional doses of Dover's powder. This plan was continued till the beginning of March, with little or no benefit. I then determined to try the power of the nitric acid, induced by its effects upon Jones, and by the analogy which Mr. Scott had pointed out, between the action of this medicine and the supposed operation of mercury, which has proved so valuable a remedy in cases of chronic rheumatism. This man began to take the acid, in the same manner with the preceding patients, and I pushed the dose to a drachm four times a-day, as soon as he could be brought to take the necessary quantity of liquid. I had the satisfaction, in this case also, of obtaining a complete cure. The patient, when I saw him last, walked upright, without any assistance.

I did not perceive, in any of these cases, that the mouth was affected by the

the exhibition of the acid, in the manner described by Mr. Scott.

5. Ann Major, in consequence of a syphilitic affection, imperfectly cured, was liable to nocturnal pains and nodes, chiefly about the forehead. She had been ill upwards of five years, when I first saw her. Mercury, mezereon, sarsaparilla, and tincture of guaiacum were successively employed, with various success, till last summer, when I put her on a course of the nitric acid. In a few weeks, she felt more relief from this medicine, than from any other that had been employed. In August last, she was ordered to take five drops of muriatic acid, four times a-day, in water. Under this course, she has had no return of pain, but thinks her appetite and strength improved.

6. Samuel Lloyd was admitted an in-patient, August 21, 1797, complaining of constant pain in his head, which was

so severe as to deprive him of rest, and render him incapable of any occupation. He had been ill for several months. I directed eight ounces of blood to be taken from the jugular vein; a blister to be applied to the crown of the head, and three grains of calomel to be given every night, at bed-time. On the 26th, finding that he was not relieved, I directed blisters to be applied behind the ears. On the 28th, he shewed me a considerable portion of bone, which he had just discharged from one nostril. Upon a strict enquiry, he informed me, that he had had a gonorrhœa, accompanied with a chancre, about seven years before; that he had taken mercury, under the direction of a medical practitioner, and had been declared cured. I ordered the calomel to be omitted, and directed him to take five drops of muriatic acid, four times a-day,

The small quantity of calomel which he had taken, affected his mouth so much,

much, as to produce a smart spitting: by this extreme susceptibility of the system, perhaps, the practitioner, who had put him under a formal mercurial course, might have been deceived, respecting the quantity necessary to be exhibited. His pains were relieved, while the spitting continued; I persisted in the use of the acid, and on the 14th of September, his pains were entirely removed; he had discharged no more bones from the nostril, and he only complained of an internal noise in his head. His mouth had been perfectly well upwards of a fortnight.

September 29th, the pain returned with great severity. The muriatic acid was then omitted, and the nitric substituted in its place.

October 7th, his pains were lessened, and his mouth had become extremely sore, by taking forty drops of the diluted nitric acid, four times a-day.

October

October 16th, his head continues easy, but he complains of pain in his limbs.

November 5th, his mouth was again sore, and there was a pretty copious discharge of saliva; the pain in his head had been returning for some time: it was now violent, particularly in the forehead. A blister was applied, but produced little relief.

November 16th, the pain in the head had become excruciating: there was still considerable soreness of the mouth. I now ordered the acid to be discontinued, and directed him to take ten grains of the oxygenated muriate of pot-ash, thrice a-day.

November 20th, a large node appeared on the left temple; he thought his pain diminished, after the first dose of the medicine. It was increased to fifteen grains, four times a-day.

November

November 28th, his forehead and face were extremely painful. The node was encreasing. His mouth was very sore, but there was no encreased discharge of saliva.

December 7th, the head and face continued very painful. There was a general enlargement of the *os frontis*. The pain of which he complained in his mouth, seemed to be an affection of the bony parts. There was no soreness of the gums, or ptyalism. I now discontinued the oxygenated muriate, and put him on a course of calomel.

December 21st, his head was much easier, though his mouth had not yet become sore.

February 8th, his head is completely relieved: his mouth is sore. He has been very open in his bowels, during the last eight days.

March 1st, his head continues easy, but he complains of pain at the angles of the jaws, in consequence of the mercurial action.

7. Mary Keene, had been a patient of the Infirmary, at different periods, during the course of five years, for syphilitic complaints, which were often suspended, but never entirely removed, by the use of mercury, guaiacum, meze-reon, and sarsaparilla. She applied to me once more, as an out-patient, in summer, 1797. She then complained of pains in the bones, and the occasional appearance of nodes, chiefly on the forehead. I ordered her to take five drops of muriatic acid, four times a-day.

When I last saw her, she had continued this medicine upwards of a month, and thought her pains greatly relieved by it. No nodes had appeared.

She used no other medicine at the
same

same time, and she had employed no mercury for a very considerable time previous to her taking this acid.

3. John Lees, had the venereal disease upwards of four months. He had chancres originally, which were healed, when I first saw him, and he now complained of pains in the bones, sore throat, a large, nauseous discharge from the nose, and some external ulcers. He had taken mercury, but not for some time before I saw him. I ordered him half a drachm of diluted nitrous acid, four times a-day. He continued this course for three weeks, without the smallest advantage; I then threw in mercury, still administering the acid, and his symptoms are yielding, more quickly than I could have expected.

In the course of two months, after this report, he was able to attend as an out-patient, at the Infirmary.

Besides the cases which I have thus mentioned at length, I have used the nitric acid in a variety of venereal complaints, in conjunction with mercury. I have not perceived, that by this combination, a smaller quantity of mercury was sufficient to eradicate the disease, nor have I found that the sensible action of mercury on the salivary glands, was at all promoted, by the use of the acid.

My observations would rather lead me to suppose, that the acid lessens the irritability of the system, and prevents the extent, to which the mercurial disease usually proceeds. In speaking of immediate deductions from facts, I set the chemical pathology aside.

It appears from the facts I have mentioned, that the specific power of the nitric acid, in venereal complaints, is limited, to certain symptoms, in the advanced stages. It seems to remove the pains of the long bones, and to act on
the

the superficial ulcers of the third stage, but I should hardly be inclined to trust the cure of any well-ascertained venereal affection, to the acid alone. Mr. Simmons's trials of this remedy, which will be found in the Appendix, shew that the acid is capable of extinguishing the symptoms, in a recent case.

I have never been able to ascertain clearly, that the soreness of the gums, and slight salivation, of which patients certainly complain sometimes, while they are using the acid, depend on a general action on the salivary glands. When the acid mixture is not sucked through a quill, or a glass tube, the gums are affected by the direct application of the acid; and patients have observed to me, that even with the precaution of using glass tubes, they still felt, that every dose of the acid affected the teeth and gums. I can positively assert, that I have known the acid taken in large quantities, for a considerable length of time, in conjunc-

tion with the free use of mercury, without producing any ulceration of the gums, or encrease of saliva; yet with the effect of destroying every venereal appearance, in well-marked cases.

I do not undertake to explain these contradictions to the principles, on which the use of the nitric acid has been introduced, in this disorder. Of the facts related by Mr. Scott, whom I feel a pride in mentioning, as one of my earliest, and most valued friends, I cannot entertain a doubt. And if my experience differs, in any respect, from his, I hope the variation may be more owing, to the great difference between the climates, in which we have respectively used the medicine, than to inaccuracy on my part.

Supposing the efficacy of the nitric acid, in this disease, to be ascertained, an important question will remain to be decided: how far the sulphuric, and
muriatic

muriatic acids are capable of acting in a similar manner. The operation of these three acids has, hitherto, been considered as nearly identical. We have used them indiscriminately, as tonics, and they have all produced those effects on the system, which the chymical physicians ascribe, at present, to the action of oxygen. The muriatic acid, in particular, has been much employed by me, both in private and hospital practice, for restoring the strength of the moving fibre, in cases of scrophula, of phthisis, of dyspepsia, or of general debility; and I have always found its effects to be, an acceleration of the pulse, an agreeable, glowing sensation in the stomach, a feeling of encreased vigour and alacrity, and a heightening of the complexion. It has proved, in many instances, an useful substitute for bark, steel, and bitters, by the smallness of its dose, and by its freedom from the disagreeable taste of some of those remedies.

The reader must have perceived, that in one or two of the preceding cases, the effect of the muriatic acid was slightly tried. Perhaps, in the progress of this enquiry, more accurate distinctions may be established, respecting the relative powers of these different acids. At present, the nitric appears to be the more valuable.

After my success with the nitric acid, in chronic rheumatism, I was induced to employ it in some cases of general debility, and great irritation of the nervous system, and I have derived as much advantage from it, as could have attended the use of the most powerful tonics. I am persuaded, that in many irritable, bilious habits, it may be used with great benefit, in place of bark, and the other usual remedies. In typhus, it will probably be found an excellent tonic, instead of bark, especially when the bowels are irritable, and when the muriatic acid would be apt to produce, or encourage

encourage diarrhoea. From the great encrease in the dose, upon which we now venture, we may expect an action, nearly adequate to all the purposes of tonics, in fever, with the advantage of a remedy less offensive to the palate, and more effectual in relieving thirst. The only case of typhus, in which this medicine can be contra-indicated, is, when there is much diarrhoea, or tendency to active inflammation, or to hæmorrhage. Yet even under these circumstances, I conceive that the full dose only is prohibited; in conjunction with opiates, it may be moderately used, with advantage.

In giving the diluted acid, with opium, it may be proper to observe, that the opium should be added to it in substance. The addition of a drachm of laudanum, to an ounce or two of the diluted acid, will sometimes produce an explosion, especially if the phial be agitated.

Upon

Upon the whole, I think we may conclude, that the nitric acid has a powerful effect in certain stages of the venereal disease, but that neither the extent, nor the permanency of this effect is yet ascertained. That we have acquired, at least, a valuable auxiliary to mercury, an useful remedy against chronic rheumatism, and, what was much wanted, a palatable tonic, *nitric acid* *is* *not* *dead*.

I have been induced to try the oxygenated muriate of potash, a remedy which we owe to the chemical pathology, by the favourable accounts I had heard of its action, from some of my medical friends. I have found it efficacious in the true scurvy, cases of which occur sometimes among the poor, in consequence of improper diet; I have even thought, that the soreness of the gums was sooner healed by this, than it is usually by ordinary remedies. In syphilitic complaints, I have seldom employed it, and in them, I have seen no remarkable advantage

vantage derived from it. I have tried it with some degree of perseverance, in cases of general debility, but it has always disappointed me, and the patients have afterwards been relieved by the bark, and other tonics. In one slight case of dropsy, it operated as a diuretic, and the disease was cured. But in several other dropsical patients, who took it from three weeks to a month, no encrease of urine was produced. I have generally given it in the dose of fifteen grains, every four hours.

I have been informed, that this medicine has been found to diminish the pains of the shin-bones, in lues, in a remarkable degree. In the case of Lloyd, which I have given, it had no influence on the nocturnal pains of the head. It appears to be perfectly safe in its application, for, though it has often disappointed my hopes of its action, I never found it productive of any inconvenience to the patient.

Since

Since these observations were written, I have been fully confirmed in my opinion, respecting the subordinate power of the nitrous acid in syphilitic cases. Practitioners in general have been led, I believe, by their experience, to the same inference; and the conclusive remarks of Mr. Pearson, on the proposed anti-venereal remedies, leave no room for any farther doubt on the subject. I continue to employ the nitrous acid, with the best effects, as a tonic, during the exhibition of mercury: it mitigates the debilitating effect of mercurial preparations, and obviates some very distressing symptoms which they are apt to produce. I believe, also, that the use of tonics is often necessary to the cure of venereal complaints, for a reason which it may be proper to mention in this place.

The action of the venereal poison on the human body, in the secondary stage of the disease, is greatly diversified in
different

different habits. In some constitutions the bones are early attacked, and severe pains, accompanied with nodes on the tibiæ, or forehead, require the brisk and liberal use of mercury, which soon removes the disease, under proper management. In other cases, the soft parts are affected; large ulcerations take place on the thighs and legs, sometimes over the whole surface of the body, as well as in their usual seat; the tonsils, and even considerable portions of the muscular parts are sometimes destroyed, before the most tender bones become diseased. In irregular cases of this kind, particularly in scrophulous habits, I have often found that debility prevailed so far, as to prevent the disease from assuming its proper type; the ulcerations have been small, fungous, and have appeared in unusual places. The constitution has not had power to form a genuine syphilis. When this happens, mercury will not effect a cure; and after repeated courses, the slight venereal appearances recur, to the

the mutual annoyance of the patient and the practitioner. Under these circumstances, I have advised with success a course of tonics without mercury, to raise up the constitution to a higher level. Mercury may then be expected to cure, especially when the nitrous acid is used in the manner which I have already explained. But I have met with ulcerations in the tonsils, and velum pendulum of the palate, which could not be permanently healed, even by this plan: in such cases, the removal of the patient to a drier air and soil has rendered the use of mercury and the acid successful. Sometimes the arsenical solution has at least afforded much relief in habits of this kind.

Mercury not unfrequently fails in curing syphilis, from mismanagement. Its good effects do not depend so much on the quantity actually introduced into the system, as on the time and degree of force allowed it. I have often seen the

the secondary venereal symptoms produced, after the mouth had been kept very sore for several weeks; but I have found, on enquiring into the mode of exhibition, that soreness of the gums had been very rapidly excited, by friction, after which a certain quantity had been regularly thrown in, just sufficient to support the ulcerated state of the mouth. In these cases, the mercurial action is almost exclusively confined to the mouth, and as it is not exerted generally on the constitution, the disease remains uncured. Since this fact has been impressed on my mind, I have been careful to charge the whole system with mercury by a steady application of the medicine, and to bring forward the soreness of the mouth, if possible, after symptoms of general irritation have been felt. The exhibition of calomel is particularly apt to be attended with the inconvenience of which I speak; for which reason I now prefer the simple mercurial pill, or the use of friction, in all cases.

Another

Another cause of failure in the action of mercury, may be found in the attempts which some practitioners have made, to calculate the medium-quantity of this medicine requisite for the cure of syphilis. Nothing can be more fallacious, or more dangerous than this idea, yet I have more than once known a cure announced on the strength of it, and in those instances the symptoms have always re-appeared. There ought to be no other rule for the quantity of mercury to be employed, than the extinction of the symptoms. The dose necessary for this purpose will be found to vary, according to the diversities of constitution and of seasons, and according to the judgment with which its force is directed.

In a former paper, I have mentioned an instance of a maniac, to whom half a grain of calomel proved a full dose. I have met with another instance of this peculiarity, in an aged, but robust man,
of

of sound mind, who could not bear a larger dose of calomel at a time, though I had occasion to order the medicine repeatedly for him, during about five years, to guard against an apoplectic tendency. He told me that he had attempted to use it, under the direction of several other practitioners, but his bowels would never bear the doses which they prescribed. I ought to add, that the calomel, given in these minute quantities, acted upon the gums. This irritation appeared to me sufficient to relieve the brain, but it would not have satisfied me in a venereal case. For as mercury evidently extinguishes that disease by producing morbid symptoms peculiar to itself, we cannot expect it to succeed when its power is limited to the gums or intestines, which are not the seat of syphilitic action.

OF THE
TREATMENT
OF THE
DYING.

Disturb him not—let him pass peaceably.

OF THE TREATMENT OF THE DYING.

THERE is hardly any subject, on which books afford us more impressive topics, than the consideration of death; and perhaps there is none less studied in its minute details. The wise look beyond it, and the inconsiderate escape from their reflections, when they would draw them towards the terrible object. It might be expected, that a scene through which we must all pass, should excite a closer attention; especially as the physical process of death loses much of its horror, on a near-view. But there is yet a more powerful motive, for lifting part of the veil; the sufferings of persons in the last stage of death, are often aggravated,

vated, by the prejudices and indiscretion of their attendants. When all hopes of revival are lost, it is still the duty of the physician to sooth the last moments of existence; and it belongs to his province, to determine when officiousness becomes torture.

It is scarcely necessary to premise, that the following observations can only be applied to foreseen, or as we term it, natural death. Philosophically speaking, indeed, all death is sudden: the ultimate period of circulation and respiration, is a total and instantaneous change from the lowest degree of life. We may adopt, on this subject, a thought, which a certain writer, more noted for his wit than his morality, has introduced over the body of a ship-wrecked sailor: *si bene calculum ponas, ubicunque naufragium est.* But when death is occasioned by unexpected circumstances, it is certainly proper to employ the means of recovery, which have been so often im-
pressed

pressed on the view of the public, though perhaps the efficacy of those means has been over-rated. The sensibility of the patient is probably so quickly destroyed, by some accidents, particularly by drowning or suspension, that ineffectual attempts can do no other harm than to fatigue the attendants.

When the approach of death is ascertained, either from the symptoms of the disease, or by the patient's own feelings, the friendly offices of the physician are not less grateful to the sick, than satisfactory to the surrounding relations. He will not, like ignorant practitioners, torment his patient, with unavailing attempts to stimulate the dissolving system, from the idle vanity of prolonging the flutter of the pulse for a few more vibrations: if he cannot alleviate his situation, he will protect him against every suffering, which has not been attached to it by nature.

While the senses remain perfect, the patient ought to direct his own conduct, both in his devotional exercises, and in the last interchange of affection with his friends. The powers of the mind, after being forcibly exerted on those objects, commonly sink into complete debility, and respiration becoming weaker every moment, the patient is rendered apparently insensible to every thing around him. But the circumstances of the disease occasion much variety in this progress. In fevers, when the brain suffers by suppuration, the interval between oppression and death is hardly discernible. In peripneumony, with all the determination to the head, which is necessarily caused by the state of the lungs, the patient is generally collected previous to death. Indeed, in most cases, in which the patient is destroyed by the rapidity of circulation, there is a sort of lucid interval, immediately before dissolution, because the action of the vessels is at length retarded, by the debility
of

of the dying state. This may be perceived, by the looks and gestures, even when the patient is incapable of speaking.

In those who die of chronic diseases, the gradation is more slow, and distinct. Consumptive patients are sometimes in a dying state, during several days: they appear, at such times, to suffer little, but to languish for complete dissolution; and I have known them express great uneasiness, when they have been recalled from the commencement of insensibility, by the cries of their friends, or the efforts of the attendants to produce pain.

In observing persons in this situation, I have always been impressed with an idea, that the approach of actual death, produces a sensation similar to that of falling asleep. The disturbance of respiration is the only apparent source of uneasiness to the dying, and sensibility seems

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seems to be impaired, in exact proportion to the decrease of that function. Besides, both the impressions of present objects, and those recalled by memory, are influenced by the extreme debility of the patient, whose wish is for absolute rest.* I could never see the close of life, under these circumstances, without recollecting those beautiful lines of Spenser :

Sleep after toil, port after stormy seas,
Ease after war, death after life doth greatly please.

In some delicate and irritable persons, a kind of struggle is sometimes excited, when respiration becomes very difficult: I have known this effort proceed so far, that

* I should not have presumed to speak so positively of these sensations, if I had not once experienced them in some degree, at the close of a delirium, of three weeks continuance, in a very dangerous typhus. An anecdote has been published, of a late eminent anatomist, which, I hope, is well-founded. A few minutes before his death, he said to those around him, " If I
had

that the patient, a very few minutes before death, has started out of bed, and stood erect for a moment; but this appeared to be the effect of apprehension. Those who resign themselves quietly to their feelings, seem to fare best.

The action of the arterial system is gradually destroyed, and not always in the same direction. This difference depends on the nature of the destroying cause: when this is general debility, however produced, the pulse ceases first in the extremities, which become entirely cold, and the larger vessels die successively, till the action of the heart itself is extinguished. In the nurse's phrase, the patient *dies upward*. But when the cause of death is a more par-

had a pen in my hand now, and were able to write, I could tell how easy and pleasant a thing it is to die."

Montaigne was among the first modern writers, who had the resolution to contradict the general opinion of the painfulness of death, and he has nearly exhausted the subject.—Buffon followed him, with more eloquence, but less argument.

tial

tial affection, in apoplexy, for example, the pulse continues in the wrists and feet, and those parts even feel to the hand uncommonly warm, just before death.

One of the surest indications of the nearness of death, is the alternate tossing of the arms, from the breast backwards. This, perhaps, is an effort to assist the muscles, which dilate the chest.

The length of the interval between insensibility, and the absolute cessation of existence, which occurs in so many cases, has given rise to a multitude of superstitious notions, and mischievous practices among the vulgar. Indeed, some of these notions are of considerable antiquity. Under the heathen mythology, it was believed that the struggles of death continued, till Proserpine had cropt the hair on the crown of the head, as victims were treated at the altar.

Virgil

Virgil has preserved this opinion, in the fourth book of the Eneid, where he offers so fine a picture of the dying agonies of Dido :

Tum Jano omnipotens, *longum miserata dolorem,*
Difficilesque obitus, Irim demisit Olympo,
 Quæ luctantem animam, nexosque resolveret artus.
 Nam, quia nec fato, merita nec morte peribat,
 Sed misera ante diem, subitoque accensa furore,
 Nondum illi flavum Proserpina vertice crinem
 Abstulerat, Stygioque caput damnaverat Orco.
 Ergo Iris croceis per cælum roscida pennis,
 Mille trahens varios adverso Sole colores,
 Devolat, et supra caput astitit : hunc ego Diti
 Sacrum jussa fero, teque isto corpore solvo.
 Sic ait, et dextrâ crinem secat : omnis et unâ
 Dilapsus calor, atque in ventos vitâ recessit.

It does not appear, that the attendants, in those ages, presumed to accelerate the death of the sufferer ; but in the two last centuries, it was very common to strip the dying, to drag them out of bed, and place them on mattresses of straw or hair, in the middle of the room. Religious habits, ashes, and relics were then
 thrown

thrown upon them, for the consolation of those,

—— who to be sure of Paradise,

Dying put on the weeds of Dominic,

Or in Franciscan thought to pass disguised:

The Hindoo, perhaps, feels little inconvenience from being placed, in his last moments, by the waters of the Ganges, though extended on the soil; but in our winterly climates, such fatigue and exposure must have been a dreadful aggravation of the horrors of a death-bed. Erasmus gives a masterly account of those extravagances of mistaken devotion, in his dialogue, entitled *The Funeral*.

The effects of these impressions still remain; it is a prevalent opinion among nurses and servants, that a patient, whose death is lingering, cannot quit life while he remains on a common bed, and that it is necessary to drag the bed away, and to place him on the mattress. This piece of cruelty is often practised, when the attendants

attendants are left to themselves. A still more hazardous practice has been very prevalent in France and Germany, and, I am afraid, is not unknown in this country. When the patient is supposed by the nurses to be nearly in a dying state, they withdraw the pillows and bolster from beneath his head; sometimes with such violence, as to throw the head back, and to add greatly to the difficulty of respiration. A full account of this inhuman custom, may be seen, in a tract preserved by VALENTINI,* drawn up by a German lawyer, in which he asserts, that patients have been repeatedly suffocated in this manner, when there was no reason to expect death from the symptoms of the disease. As the avowed motive for this barbarity, is a desire *to put the patient out of pain*, that is, to put him to death, it is incumbent on his friends to preserve him from the hands of these executioners.

* Novellæ Medico-legales, p. 1200.

Another

Another improper practice, is the precipitation with which the attendants *lay out* the body, immediately after death appears to have taken place. I have known them strip the body, in very cold, stormy weather, wrap it in cold linen, throwing a single sheet over it, and opening the doors and windows of the apartment, in little more than half an hour, after a patient had died suddenly.

There is, indeed, a singular instance recorded by SYDENHAM, of the revival of a patient thus used, during the prevalence of the fiery treatment of small-pox. A young man, having gone to Bristol, was seized with the small-pox, and became delirious. During the absence of his nurse, the attendance supposed him to be dead, and on account of the heat of the season, and the patient's corpulency, took the body out of bed, and laid it naked on a table, merely

merely throwing a sheet over it. The patient, thus cooled, began to revive. His nurse, on her return, perceived signs of life in him; he recovered, and, several years afterwards, told this story to Dr. Sydenham. But the rough treatment of the body, and the sudden alteration from the temperate warmth of the bed, to the rigorous cold of a winter's night, have, perhaps, in some cases, extinguished the feeble remains of life, which might have been cherished by more gentle methods.

It is too certain, that the helpless patient feels all these cruelties, after he has become unable to express his sensations distinctly. The testimony of persons, who have recovered from apparent death, leaves no doubt on this head. Perhaps a more deplorable condition can scarcely be conceived, than that of the expiring master of a family, transferred from the soothing care of his friends, to the officious folly, or rugged indifference

of servants. This is a state of suffering to which we are all exposed, and if it were unavoidable, I should be far from desiring to unveil so afflicting a prospect. But the means of prevention are so easy, that I cannot forbear to solicit the public attention to them.

When the tossing of the arms, which I have described, the rattling noise in respiration, and difficulty of swallowing have come on, all unnecessary noise and bustle about the dying person should be prohibited. The bed-curtains should be drawn nearly close, and unless the patient should place himself in a posture evidently uneasy, he should be left undisturbed. Exclamations of grief, and the crowding of the family round the bed, only serve to harrass him.

The common practice, of plying him with liquors of different kinds, and of forcing them into his mouth, when he cannot

cannot swallow, should be totally abstained from.

When he no longer breathes, one person only should remain in the room, who should take care that no alteration be made in the state of the bed. Every thing should be conducted, as if he were in a tranquil sleep. If the weather be hot, the windows of the room may be opened, and the bed-curtains undrawn, in the course of two or three hours. In winter, it will be sufficient to withdraw the curtains within that time.

There can be no just reason for the haste, with which it is usual to lay out the body. Several hours may be very properly suffered to elapse, before this is done; for the joints do not commonly become rigid for a considerable time. At the end of that period, the body will be completely cold, and all remains of sensibility will have been extinguished.

It is far from my intention, to excite, by these remarks, apprehensions respecting premature interment, in those who may be led to peruse this paper, without much knowledge of medical subjects. The period to which I wish to direct attention, precedes the funeral by several days, according to the customs of this country; and it must require uncommon folly, to incur any hazard of such an event.

In France, there seems to have been a very blameable degree of haste; and there can be little doubt, from the facts mentioned by BRUHIER (even allowing something for exaggeration), that persons have revived on the bier, and during the performance of the funeral-service, after having been rashly pronounced dead, by inattentive observers. When BRUHIER wrote, the danger of suppressing the faint signs of remaining life was encreased, by the horrible practice of stopping up the mouth, nostrils, ears,

ears, and other passages, immediately after the supposed decease of the patient.

If we can depend on the facts related by this author, of the interment of persons within twelve hours, after strong accessions of epilepsy or apoplexy, we may, indeed, admit the dreadful possibility, of their being buried in a state not destitute of consciousness, though deprived of all power of expressing it.

According to BRUHIER, the rituals which were most cautiously drawn up, only enjoined the delay of interment for twenty-four hours after death, but others directed it to be performed within half of that period. He mentions a shocking instance of the abuse of the power thus confided to individuals, which, I hope, could hardly be paralleled, under all the carelessness on the subject of interment, which seems to have existed at that time in France.

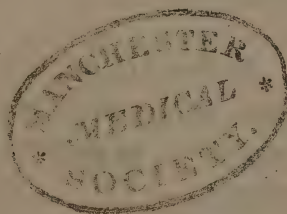
A provincial notary, who had a law-suit with his vicar, was seized with an epileptic fit, so severe, that the attendants thought him dead. The vicar took care to bury his antagonist, at the expiration of twelve hours. Next day, a person who had occasion to go into the church, heard a great noise, proceeding from the grave of this unfortunate man; he gave immediate notice of it to the clergyman, who desired him to say nothing about it. The family, however, were informed of this circumstance, and obtained permission to take up the body; it was found lifeless, but marks of struggling were perceived on the hands.*

Happily, the usage of keeping the body unburied during several days, is so firmly established in this country, that it is unnecessary to speculate on the possibility of such abuses. The slightest ap-

* De l'Incertitude des Signes de la Mort, tom. i. p. 168.

pearance of beginning putrefaction, affords sufficient security against any revisitings of life, and marks of this nature are almost always visible, before the date of interment observed here.

APPENDIX.



In the paper subjoined, No. I, are contained some rules for the preservation of the poor from contagious fevers, which were originally drawn up, for the purpose of being distributed by the Board of Health. Circumstances, which it would be uninteresting to mention, prevented its publication through that channel, and I insert it in this place, because it contains observations, which may be found useful, in other manufacturing towns. I have accommodated the language, to the persons for whose benefit it was designed.

In No. II, are to be found some observations, with which Mr. SIMMONS has favoured me, on subjects treated in the present volume.

APPENDIX.

No. I.

ADVICE TO THE POOR.

YOU are requested to read the following paper with attention, by persons who are endeavouring to relieve you from the misery and fatality of fevers, and other infectious diseases. A great deal has been done by the establishment of the fever-wards, the good effects of which you daily experience; but much depends upon your own conduct, for preventing the first occasions of sickness. We can only stop the progress of diseases after they have once begun, but it is greatly in your power to prevent them from beginning at all, by attending to the simple directions which follow.

Avoid

Avoid living in damp cellars: they destroy your constitutions, and shorten your lives. No temptation of low rents can counterbalance their ill effects. You are apt to crowd into the cellars of new buildings, supposing them to be clean. This is a fatal mistake. A new house is always damp for two years, and the cellars, which you inhabit under them, are generally as moist as the bottom of a well. In such places, you are liable to bad fevers, which often throw the patient into a decline, and you are apt to get rheumatic complaints, that continue for a long time, and disable you from working.

If you cannot help taking a cellar, be attentive to have all the windows put in good repair, before you venture into it, and, if possible, get it whitewashed. If you attempt to live in a cellar with broken windows, colds and fevers will be the certain consequences.

In many parts of the town, you sleep in back-rooms, behind the front-cellar, which are dark, and have no proper circulation of air. It would be much more healthy to sleep to the front: at least, when you have large families, which is often the case, you ought to divide them, and not to crowd the whole together in the back-cellar.

Keep your persons and houses as clean as your employments will permit, and do not regret the loss of an hour's wages, when your time is occupied in attending to cleanliness. It is better to give up a little time occasionally, to keep your houses neat, than to see your whole family lying sick, in consequence of working constantly, without cleaning. It would be of great service, if you could contrive to air your beds and bed-clothes out of doors, once or twice a-week.

Always wash your children from head to foot with cold water, before you send them

them to work in the morning. Take care to keep them dry in their feet, and never allow them to go to work without giving them their breakfast, though you should have nothing to offer them but a crust of bread, and a little water. Children who get wet feet, when they go out early fasting, seldom escape fevers, or severe colds.

If you know that any of your neighbours are in a starving condition, apply to some opulent persons in the neighbourhood; get them recommended to the overseer; or, if they are sick, to the Infirmary. Want of necessary food produces bad fevers; and many of you may suffer from neglecting poor distressed persons, whom timely relief would have preserved from the disease.

When you know, or have reason to believe that any of your neighbours are afflicted with fevers, and that they have not taken care to procure the assistance
afforded

afforded by the Infirmary, you ought, both from a regard to them and to yourselves, to give immediate information to the physicians, or some trustee of the Infirmary, or to Mr. Bellott, Secretary to the Board of Health. The Board allows the sum of two shillings, for every well-founded information of this kind.

You ought to be very cautious in purchasing old clothes, or second-hand furniture; as they may be brought from houses infected with fever, and you may introduce the infection with them, into your own dwellings. Every article of this kind ought to be stoved or ventilated, before it is admitted into your houses.

Your sick neighbours, when the fever gets into their houses, may often require assistance from you. It would be cruel to refuse them, yet it is hard that you should be obliged to expose your health, and that of your family. You ought

ought never to visit them from idle curiosity. But when they require your help in making their beds, washing, or turning the sick, you may preserve yourselves from being infected, by tying a handkerchief across your face, just below the eyes, to prevent the exhalations from the bodies of the sick from entering your mouth and nostrils. As soon as you return to your own house, wash your hands and face in cold water, and avoid touching any of your family, for half, or three quarters of an hour.

Your health will always be materially injured by the following circumstances; living in small back buildings, adjoining to the open vaults of privies; living in cellars, where the streets are not properly sougled, or drained: living in narrow bye streets, where sheep are slaughtered, and where the blood and garbage are allowed to stagnate and corrupt; and, perhaps, more than all, by living crouded together, in dirty lodging-houses, where
you

you cannot have the common comforts of light and air.

It should be unnecessary to remind you, that much sickness is occasioned among you, by passing your evenings at alehouses, or in strolling about the streets, or in the fields adjoining to the town. Perhaps those who are most apt to expose themselves in this manner, would pay little attention to dissuasive arguments of any kind. However, those who feel an interest in your welfare, cannot omit making the remark.

There is another subject of great importance to you, on which you seem to want information. A great number of children die of the natural small-pox, almost every year. This mortality must be imputed, in a great degree, to your own negligence; for the faculty at the Infirmary offer to inoculate your children, and give public notice of the proper time for making your application,

twice a-year. The next period for inoculation will be in March ; the succeeding period in September. The chance of recovery from the small-pox received by inoculation, is so much greater than the chance of recovery from the natural kind, that you ought to consider yourselves as performing a duty to your children, and to the public, in bringing those who have not yet had the small-pox, to be inoculated at the Infirmary.

You ought to be informed, that there is scarcely any thing more injurious to the health of children, than allowing them to work at night in the cotton-mills. It may not always be in your power to prevent their being employed in this manner, but you should be made acquainted with the danger to which you expose them. There is no hazard incurred by their working during the day, in clean, well-managed cotton-mills.

It is also proper to inform you, that
you

you may be infected with fevers, by working in the same place with persons who have just recovered from fevers, or by people who come from infected houses, where they are at no pains to keep themselves clean. It is a fact well-known to this Board, that infectious fevers have been conveyed from Manchester to neighbouring towns, and cotton-mills, by persons going from infected houses. You had better collect something among yourselves, to support such persons for a fortnight after their recovery, than expose yourselves to the risk of catching a fever, by their returning too early to work.

People who are discharged from the fever-ward, bring no infection out with them; their clothes being aired and cleaned, during their stay in the House of Recovery.

No. II.

TO DR. FERRIAR.

Dear Sir,

If the following communications, on professional subjects, shall be deemed worthy of your notice, they are entirely at your disposal, and I shall feel gratified, in their being laid before the public, under the sanction of your name. I am, dear Sir,

your sincere and faithful servant,

WM. SIMMONS.

Manchester,
Feb. 10th, 1798.

ON THE USE OF THE KALI PURUM, AS A
CAUSTIC IN HYDROPHOBIA.

IN the debate on the dog-tax, in the House of Commons, in the year 1796, an honourable member (Mr. Dent) mentioned, that forty cases of hydrophobia had occurred at the Manchester Infirmary,

mary, within a fortnight; and it has been since observed in some of the periodical publications, that such a number of cases must furnish practical inferences decisive of some mode of treatment. Happily, however, for the individuals, not one case of hydrophobia occurred at the time alluded to, but a considerable number, probably upwards of forty, applied at the Infirmary, who had been bitten by mad-dogs—nine of which offered themselves one morning, on my out-patient day. As they all escaped the disease, the means of prevention used may not be uninteresting to medical readers, which consisted simply in the application of the *kali purum* to the wounded parts, and, by way of seeming to do something, the Ormskirk medicine was given, in conformity to custom, to those whose prejudices led them to expect it. For twenty years I have myself had experience of the success attendant on applying this caustic, in wounds inflicted by the bite of mad animals,

or of animals supposed to be mad, and in no one instance has hydrophobia followed its use. It has, I am informed, been used at our Infirmary ever since its foundation, now near fifty years, with uniform success. Many remedies have been cried up as specific, in preventing and in curing this disease, but their inefficacy is too clearly evinced, in its appearing after they have been attentively administered. Excision, the actual and potential cautery, have been known to fail; and no reliance is now placed on the Tonquin, the Ormskirk, or on any other remedy.

Although the disease would not have appeared, in many of the instances in which the kali purum was employed, it is highly probable that it would have shewn itself in some of them, for it can scarcely be conceived, that the poison should escape being infused in such a multiplicity of instances. Excision is now recommended as the chief means of

of prevention, and when practicable should be duly enforced; its effect, however, will be secured, by touching the surface of the incised part with the kali purum. In superficial and in deep wounds, I have never known it disappoint the expectation of the practitioner, and it may therefore be applied alone, or jointly with other means, observing only to induce a slough proportioned to the depth and extent of the wound, so as to leave no doubt of having penetrated to the very bottom.

ON THE USE OF NITRIC ACID, IN THE LUES VENEREA.

CASE I.

Mr. ——— requested me to visit his man-servant, on Friday evening the 4th of November, 1797. I found him complaining of a small chancre, situated

on the upper part of the prepuce, and inconsiderable pain, from a bubo in the right groin, in a state of suppuration. I directed him an opening medicine, to be taken in the morning, to apply a common poultice to the bubo, twice a-day, and to keep quiet.

Nov. 26, Suppuration is considerably advanced, and he is freer from pain.

One drachm of the *nitric* acid, diluted in a quart of water, and rendered palatable with sugar, was directed to be taken daily.

Nov. 27, Felt heated last night from the medicine—tongue moist—pulse natural.

Nov. 29, Chancre cleaner—the acid has produced no sensible effect. A caustic was applied to the bubo.

Dec. 1, The chancre looks clean, and
is

is healing—ordered to increase the acid to one drachm and a half, daily.

Dec. 5, Chancre healing—bubo foul—increase the acid to two drachms, daily.

Dec. 7, He took the acid yesterday, as prescribed on the 5th—perspired much last night—chancre nearly healed—the bubo discharges good matter.

Dec. 11, Chancre healed—the bubo looks clean.

Dec. 20, Edges of the bubo indurated and inverted.

Two drachms and a half of acid were directed to be taken daily, and the ulcer was dressed with adhesive plasters.

Dec. 27, Ulcer much diminished in size, and the induration gone. For two days past, he has taken three drachms of the

the acid in a day, yet his gums are free from soreness, and he now goes about his business as usual.

Jan. 10, 1798, He has taken three drachms daily, since the last report—bubo nearly healed. A hoarseness, and slight cough have been troublesome, for the last ten days, and the hoarseness continues increasing—there is a particular circumscribed redness in his cheeks, but no soreness in his throat or gums.

Ordered to discontinue the acid.

During the whole time, he took the diluted acid through a quill, and it was measured out to him daily in a graduated glass measure.

No applicaion whatever was used to the chancre, and only dry lint to the ulcer of the bubo, previous to the adhesive plasters.

CASE II.

Mf. ———'s man-servant has been afflicted with a venereal complaint for some time. The present symptoms are, nocturnal pains—extensive ulcers in the tonsils—eruptions on the forehead, and hairy scalp, and an abscess on the right side of the scrotum, affecting the testicle on that side.

I directed him to take the muriated mercury, and so suspend the scrotum in a bag-truss. On the disappearance of the symptoms, he left off the medicine; the former consequently returned, after a short interval, and he has now ulcers in his tonsils, and a discharge of matter from the scrotum.

Nov. 29, I directed sixty drops of the *nitric acid*, diluted in a quart of water, with some sugar, to be taken daily.

Dec. 4, Throat better—complains of great tenderness in his teeth and gums, but

but there is no visible inflammation in the latter. Ordered to take the medicine through a quill.

Dec. 7, Throat better—no complaint in the mouth—pains abated.

Dec. 14, Throat the same—two days ago, the eruption re-appeared on his head and forehead. Increase the acid to eighty drops daily.

Dec. 29, Eighty drops made his throat so painful, that he was obliged to lessen the dose to sixty. The tonsils are now healed, but an ulcer has appeared in the angle, at the base of the uvula, on the left side—the eruption on the forehead is very itchy, but less vivid—that on the scalp better. Let sixty drops be taken daily.

Jan. 10, 1798, Tonsils healed, but the new ulcer extends rapidly—eruption less
vivid.

vivid.—Again increase the dose to eighty drops in a day.

Jan. 16, Ulcer increasing—eruptions as vivid as at any former period—complains of pain in his throat, and of the return of the nocturnal pains, which had ceased—his countenance also looks heavy and oppressed, exhibiting the same appearance as when he first applied to me—scrotum very little troublesome.—He cannot take more than sixty drops in a day.

Discontinue the nitric acid, and again have recourse to mercury.

The first case shews, that the *nitric* acid will cure the primary symptoms of lues venerea, and the second proves, that though it is capable of relieving ulcers of the tonsils, by its direct action, yet it fails in permanently removing secondary symptoms, whatever temporary relief it may afford, in such doses
as

as can be taken, when there are ulcers in the throat. I have given the common nitrous acid of the shops, in this disease, under a variety of circumstances, and in primary and secondary symptoms: the result corresponds with the above recited cases.

It requires neither confinement, particular mode of diet, nor hinderance of business. Whether the hoarseness, in the first case, was owing to the acid; I cannot determine; probably a much larger dose was given than is absolutely necessary in primary symptoms, but I was desirous to know to what extent it might be administered, as it was then measured with precision, and taken with the utmost regularity. When not sufficiently diluted, it has excited vomiting, and pain in the stomach. It would appear, that the affection of the gums, and consequent salivation, is owing solely to its direct action on them, and may be avoided

avoided by sucking it through a quill, straw, or glass tube.

Although it has failed me in secondary symptoms, when the constitution has been much exhausted by previous disease, and a long course of mercury, it has had a speedy and permanent effect in restoring the health and strength. Under circumstances where a mercurial course cannot be entered on, it arrests the progress of the disease. An example of this may be taken from a person labouring under lues venerea, being seized with typhus—the venereal action is suspended during the fever, and is again renewed on its termination; in this case, mercury must be of doubtful propriety: the acid, however, will not only relieve the venereal affection, but restore the patient's strength, and coincides admirably with any tonic plan, that may be adopted.

In

In ulcers, remaining after a mercurial course, and which, though for a time relieved, are aggravated by the further use of mercury, I have derived much benefit from it.

Such is the result of my present experience of this remedy. I am little solicitous to know how the salutary changes are induced, and cannot at present acquiesce in the doctrine of oxygenation of the fluids, either by means of the nitric acid, or of mercury; and it must be admitted, that opium, laurel-water, and other powerful narcotics, do not act by any known elective attraction.

ADDITIONAL NOTE RESPECTING THE
TREATMENT OF FEVER.

I Have lately met with three cases of the Walcheren fever, as it has been called, in three private soldiers, who were attacked by the complaint, during the siege of Flushing. One of these then had been ill during eight months, another during nine, the third during six months. The complaint, in all, was a severe quotidian intermittent, which had not been relieved by any medicines which they had taken in the military hospitals.

In the first case, which had continued eight months, the paroxysms were im-
VOL. III. U immediately

mediately stopped by giving the liquor Arsenicalis, in the usual doses. The man remained well for a month, when he had a relapse; but the disease was converted to the milder form of a quartan. His fits are now very slight. In the two other cases, the paroxysms were not stopped, by the same medicine; but the complaint was converted to a tertian. In that case which had lasted nine months, the liquor was continued, till the mouth became as sore as if the patient had been taking mercury, yet the stomach and bowels were not at all affected. This is a curious and important fact concerning the action of the medicine. The exhibition of the liquor was consequently suspended, and Cinchona in substance was given, till the mouth healed. Finding that the tertian still subsisted, I renewed the use of the liquor, in addition to the Cinchona, and had the satisfaction of curing the disease.

From

From the effect of Arsenic in these three cases, I cannot help regretting that it was not more early and assiduously employed than it appears to have been, during the prevalence of the disease in our army. A remedy so extremely cheap, so portable, and so easily prepared as the liquor Arsenicalis, might have prevented the destruction of many gallant men, and retrieved the constitutions of those who survived the first attacks of the intermittent.

FINIS.



MEDICAL HISTORIES

AND

REFLECTIONS.



MEDICAL HISTORIES

AND

REFLECTIONS.

VOLUME IV.



BY

JOHN FERRIAR, M. D.

SENIOR PHYSICIAN TO THE MANCHESTER INFIRMARY,
DISPENSARY, LUNATIC HOSPITAL AND ASYLUM.

O! Herbs, roots, flowers, the power that in you lies,
Could mortals but discern your properties.

Fletcher's Faithful Shepherdess.

LONDON:

PRINTED FOR CADELL AND DAVIES;

BY

J. AND J. HADDOCK,
WARRINGTON.

1813.

PREFACE.

IT may be expected, by some readers, that I should account for the small size of the volume, which I now offer to their notice. The collection of cases which it contains, appeared to me to merit an early publication, without waiting for additional matter to swell the size of the book; utility therefore superseded the consideration of uniformity. It would have been easy to have extended the volume, by giving more diffuse narratives of the symptoms and progress of the diseases, but to this practice I feel a great repugnance: it leads to a waste of the
reader's

reader's time and attention, and is in direct opposition to the nervous brevity of the best models for medical writings. I have endeavoured, on the contrary, to compress the details of cases as much as possible, that the reader may be in full possession of the result, without loading his memory with adventitious circumstances.

A principal object in this publication has been to ascertain the existence of a more certain hydragogue, than any which the faculty have hitherto been accustomed to employ. This, after many years of research, I have accomplished, in a combination with the Extract of Elaterium; a preparation formed, according to Pliny's expression, "ad magnos mortalium usus;"

* *Histor. Natural. Lib. xx. Cap. i.*

though

though he was not acquainted with its power in dropsical complaints. Fresh proofs of the efficacy of this combination are rapidly accumulating on my hands, but I did not think myself authorized to delay the communication longer, as many persons are probably suffering at this moment, who might be relieved by its employment.

Another inducement to an early, perhaps hasty publication, was the unusual number of diabetic cases, which fell under my observation, within the last two years. The success which attended my practice in many instances of this disease, and the relief which it generally afforded, seemed to require publicity, during the fluctuating impressions produced by various treatises on this important subject.

I can

I can only claim the fortuitous merit of offering a larger body of evidence, distinctly stated, than any writer who has lately addressed the public, respecting the disease.

For the attempt to form a more accurate idea of the formation of saccharine matter, in Diabetes, I must bespeak the reader's indulgence. In this part of my observations, I have ventured on the dangerous ground of hypothesis, but I hope not beyond its land-marks.

The case of scirrhus in the pylorus, which at present closes the volume, affords a clear view of the symptoms, in an unmixed instance of that unhappy complaint.



OBSERVATIONS
ON THE
TREATMENT OF DROPSY.

VOL. IV. B



OBSERVATIONS
ON THE
TREATMENT OF DROPSY.

HAVING been induced, by the failure of other hydragogues, in a case of general dropsy, to revive the use of the extract of Elaterium, I think it incumbent on me to offer to the public an account of my experience of the effects of that remedy.

It must appear somewhat extraordinary, that a medicine which was frequently used as a purgative, by HIPPOCRATES, and which is recommended

B 2 strongly

strongly, in dropsy, by SYDENHAM and HOFFMAN, should have been neglected for many years, in general practice. This circumstance can only be accounted for, by supposing that its very active powers had been experienced with noxious effect, in consequence of its being administered in too large doses.* From an error of this kind, arose the long doubts respecting the action of antimony. We learn, from GUY PATIN's letters, that the dose of antimonial wine, commonly given in fevers, in his time, was three ounces. The bolder practitioners gave this quantity undivided, and must frequently, of course, have destroyed their patients. More cautious men exhibited only a third of this dose, and took their chance of its proving either emetic or purgative. The same

* We may guess at the opinion of physicians on the continent, from Hoffman's short account of medicines. "SOLENANDER scribit, Elaterium esse in Catalogo diaboli, quo necat homines, &c." De Materia Medica, C. 6. Hoffman himself knew better.

author informs us, that Louis XIV, in the early part of his reign, had nearly perished, from the effects of the first divided portion, thus given, which produced about twenty-two stools.

The extract of *Elatarium* is, indeed, on its first exhibition to a patient, nearly as active, and as dangerous, if incautiously given, as arsenic. But its powers in removing serous accumulations, in the cavities of the human body, surpass those of any other medicine; and the astonishing relief which it affords, in the dyspnæa occasioned by hydrothorax or ascites, even in persons of the most advanced age, must place it in the first class of hydragogues.

I flatter myself, therefore, that I shall contribute something to the alleviation of human misery, by explaining in what manner I have been enabled to give this formidable power a proper direction, and to render its use at once safe and efficacious.

B. S. The

The sensible effects of Elaterium are, severe and constant nausea, frequent watery stools, and, in considerable doses, vomiting. It does not uniformly increase the urine; and for this reason, it is generally proper to combine it with more certain diuretics. After continuing the use of the medicine for some days, the patient will sometimes bear a considerable increase of the dose. I have gone to the extent of five or six grains a-day, in this manner, without producing any inconvenience. But it is always prudent to begin with the lowest dose, which is the sixteenth part of a grain of the extract.

CASE I.

The first case in which I had recourse to the Elaterium, (excepting some occasional combinations of it with other hydragogues,) was that of a gentleman rather advanced in life, who was attended by Mr. Thorpe of this place and myself, in 1809. When

When I first saw him, he laboured under severe symptoms of hydrothorax; the Orthopnæa was particularly distressing during the night; his pulse was irregular, his urine scanty, and an accumulation of fluid was evidently taking place, both in the cavity of the abdomen, and in the cellular membrane.

After trying all the usual methods of promoting absorption, the distention of the abdomen became so great, and the patient's respiration was so much affected, that the operation of tapping was proposed, and was agreed to by the family. Previously to employing this resource, however, I thought it right to try the effect of the elaterium; and being then little accustomed to prescribe it, I directed it in the dose of half a grain, every morning. It produced a succession of watery stools, great relief in respiration, and the urine was increased to the quantity of two quarts in twenty-four hours.

With this happy change of circumstances, tapping was no longer thought of; we pursued our course, cautiously, with the Elaterium, and had the pleasure of seeing the swellings disappear, and of restoring the patient to comfortable sound sleep, and a good appetite.

In the course of a few weeks, he was completely emptied, and was enabled to use exercise in the air. But, having exposed himself imprudently out of doors, in a stormy, inclement day, he brought on a pneumonic affection, and a return of serous effusion, which carried him off.

CASE II.

About the same time, I was desired to visit a lady, upwards of 80, who was a patient of Mr. Cunliffe of Bury. She laboured under general dropsy; and the accumulation in the thorax was so distressing, that during six weeks before I saw

saw her, she had been unable to lie down in bed, and could only sleep for a few minutes together, as she sat in her chair. Very active hydragogues having been employed, I advised a trial of the elaterium, which produced almost immediate relief. This patient also took the medicine in the dose of half a grain. She suffered little inconvenience from its effect on her bowels; it produced watery stools, an increased flow of urine, and a diminution of the swellings. She was now able to lie down in bed, and to sleep soundly, and she recovered so far, as to pay visits to her friends at short distances.

CASE III.

Another elderly lady, who was affected with hydrothorax and anasarca, took the extract of *Elaterium*, not long after, in smaller doses, as it occasioned great nausea. Though she was much harassed by the watery stools, she yet felt

felt so much relief in her respiration, that she persevered in taking the medicine, till she had attained a state of comparative ease. Her constitution was too much worn out to admit more than palliative practice.

CASE IV.

I was called to Mr. K. a person between 60 and 70, in February 1812. He was affected with general dropsy; with great difficulty of breathing; and the anasarca was rapidly increasing. I put him on the use of the extract of Elaterium, with diuretics. The first morning-dose produced five or six watery stools, which exhausted him considerably, but gave him much relief in his respiration. Finding that the effects of the remedy were so severe, I reduced the dose to a very minute quantity, which is readily done, by dissolving a grain of the extract in a four-ounce mixture, and exhibiting only a few drops

drops for a dose. Upon this plan, his swellings, and the affection of the chest were completely removed, in the course of a fortnight.

CASE V:

Mr. B. about 50 years of age, was liable to severe attacks, resembling the paroxysms of spasmodic asthma, which repeatedly placed him in situations of great danger. About half a year ago, he called upon me, in great distress, owing to a dry cough, with orthopnæa, and evident marks of hydrothorax. His urine was now scanty. I directed the Elaterium for him, in the usual manner, and in the course of a few days relieved him from his symptoms, by the evacuation of watery stools. He exposed himself to cold, soon after, and brought on a relapse; and his stomach became so extremely irritable to the stimulus of Elaterium, that I was under the necessity of changing his medicine. I then ordered him a solution of gamboge, which

he took in the proportion of half a grain in each dose. This remedy has had the desired effect of clearing his respiration, and he is now in very good health.

* This statement was written in summer, 1812. In December last, Mr. B. was attacked with symptoms of Ascites and Anasarca, and with indications of a fresh collection of water in the chest. He was again completely emptied by a combination of Elaterium, Melampodium, Gamboge, Calomel and Squills, and was able to attend to his business as usual.

A determination to the brain subsequently took place, and I was called to him just in time to witness his dissolution by an apoplectic stroke.

CASE VI.

Mrs. H. aged about 35, came to me, with well-marked symptoms of hydrothorax. She had the orthopnœa, dry

cough, scantiness of urine, and numbness of the arm, and was seldom able to lie down in bed. Symptoms of general anasarca were likewise coming on. I directed the Elaterium, with diuretics, and in the course of about three months, she was completely restored to health.

CASE VII.

Mr. B. a gentleman-farmer, about 60 years of age, had symptoms of ascites and hydrothorax, and parted with little urine. I ordered him the Elaterium with diuretics. He received much relief from the watery stools, and appeared to be recovering; but he had not patience to persevere steadily in using his medicines. A few weeks ago, I heard from him again. The legs had now become anasarcous, and a rupture of the skin, and discharge of serum from the orifice, had taken place. The integuments of the penis and scrotum were also much distended. He expressed

pressed great dislike to the mixture which contained the Elaterium, and begged that some other medicine might be tried. I therefore had recourse to the combination recommended by Hippocrates, of Elaterium with black Hellebore, joined with small quantities of calomel and squills, formed into pills. The effect of this combination he described in a letter to me. Two pills, containing about one-eighth of a grain of Elaterium, and a grain and half of black Hellebore, produced about two quarts of fluid, by stool; gave him great relief; but left him very low. In this case I despair of ultimate success.

CASE VIII.

Mr. A. a farmer, about 66 years of age, was seized with symptoms of dropsy, after exposure to the weather, on a very stormy winter-night. When I saw him, he had Orthopnæa, dry cough, was unable to lie down in bed, and his
urine

urine was very scanty. He had also anasarcaous swellings of the legs, and water was collecting in the abdomen.

I ordered the Elaterium in the usual way, and it operated very gently, giving him watery stools, relieving his breathing, and removing the swellings of his legs. In the course of a month, he was so far recovered, that I discontinued my attendance. He brought on a relapse, soon after, by exposing himself to the weather, on a cold day in spring, and I found him again distressed with Orthopnæa, and the symptoms of Ascites renewed. He could no longer bear the elaterium, in the usual form, and gamboge was tried, without effect. I then directed the combination of black Hellebore, Calomel and Squills, with a very minute portion of Elaterium; and from this remedy he had watery stools, an increase of urine, and relief from all his uneasy symptoms; his urine was also encreased to three quarts in twenty-four hours. The

The small quantity of Calomel which was contained in the pills, produced an unexpected ptyalism in this case. The urine decreased, of course, but the swellings of the legs were removed, and that of the abdomen was very much diminished. When the ptyalism began to abate, the effusion in the peritoneum was found to be nearly gone; the pulse became free and open; and the urine increased again in quantity. He is now completely emptied of water, and has recovered his appetite and spirits. This patient, I understand, afterwards relapsed, and died. I did not see him in his last illness.

CASE IX.

Mr. W. C. had brought on a general tendency to dropsy, by the abuse of spirituous liquors, though he was not much more than 50. He suffered from Orthopnæa, and swelling of the abdomen. He took small doses of Elaterium, in conjunction

conjunction with some of the bitter extracts, and was, for some time, entirely relieved from his complaints. Want of steadiness in using his medicine, and a recurrence to indulgence in the use of spirits, occasioned a relapse, which proved fatal.

CASE X.

Joseph Lees was admitted at the Infirmary, April 8th, 1811, with symptoms of general dropsy; he took the extract of Elaterium, with diuretics, and in ten days was discharged cured.

CASE XI.

Mary Prescott was admitted, Nov. 4th, 1811, with symptoms of ascites and anasarca. She was directed to take the extract of Elaterium, in a diuretic mixture, and was discharged cured, in the beginning of December.

CASE XII.

James Birch was admitted, Dec. 16th, 1811, with ascites and anasarca. He took the extract of Elaterium, in a diuretic mixture. and went out, much relieved, on the 9th of January, 1812.

CASE XIII.

James Barnes was admitted, Jan. 1st, 1812, with anasarca, and incipient ascites. He took Elaterium with diuretics, and was discharged cured, on the 11th of the same month.

CASE XIV.

John Marsh of Shude Hill, Manchester, was admitted an home-patient, June 1st, 1812. He was affected with symptoms of hydrothorax, ascites, and anasarca. He was ordered to take the extract of Elaterium with diuretics; and in a few days was completely relieved from

from his swellings and Orthopnæa, and was enabled to attend to his business.

CASE XV.

Ann Calvert, who has occasionally been a patient of the Infirmary, for ascites and hydrothorax, ever since Dec. 1794, and who has been relieved by frequent repetitions of the operation of tapping, was admitted, with her usual symptoms, in Feb. 1811. Though I could expect nothing farther than the palliation of a disease of seventeen years' standing, I thought it right to try the effect of Elaterium. It did not succeed. Indeed it produced such extreme nausea, in the smallest doses, that I have reason to doubt whether she gave it a fair trial. It has been necessary to recur to the operation, twice, in this case.

CASE XVI.

George Worthington was admitted, in July, 1810, with symptoms of general
 c 2 dropsy.

dropsy. He took a quarter of a grain of extract of Elaterium thrice a-day, and two drachms of Crystals of Tartar every morning. He was discharged cured, in the beginning of August.

CASE XVII.

Jane Pryme, was admitted, Sep. 3rd, 1811, with symptoms of general dropsy. She was ordered half an ounce of the Crystals of Tartar, every morning; and a diuretic mixture of four ounces, in which two grains of extract of Elaterium were dissolved. The dose was a tea spoonful four times a-day. Another grain of the extract was added to the mixture, in the course of a few days. She was discharged cured, on the 27th of the same month.

CASE XVIII.

Eliz. Bickley was admitted, Dec. 3rd, 1810, with symptoms of general dropsy.
She

She took the extract of *Elaterium*, dissolved in a diuretic mixture, without any material benefit.

CASE XIX.

Mrs. B. a lady upwards of 60, had been threatened, for about five years, with a dropsical attack. When I saw her, she laboured under *Orthopnæa*, and *anasarca*, which affected even the backs of her hands, and *ascites*; her cheeks were also swelled; her urine was scanty; and general dropsy was rapidly encreasing. She had received occasional relief, from purging doses of *jallap*, but when she was obliged to desist from this plan, by debility, her symptoms always recurred, and with increasing violence.

I put her on a course of extract of *Elaterium*, dissolved in a diuretic mixture, which in a few days relieved the *Orthopnæa*; and by perseverance, reduced the swellings of the belly and

C 3 limbs,

limbs, and restored her urine to a natural quantity. She left this place for her usual residence, in about a month, completely restored to health. The formula, which I have commonly employed, in cases of this kind, is the following:

R Extract. Elaterii gr. j.

Sp. Æther. Nitros. unc. ij.

Tinct. Scill.

Oxymell. Colchic. sing. unc. ss.

Syrup. Rhamni unc. j.—m.

ft. Solutio.—Capt. drach. j. ex aquæ panxillo, ter, quater-ve in die.

CASE XX.

Ann Owen, of Owen's Court, was admitted a home-patient, Feb. 1811. She had Ascites, Anasarca and Hydrothorax; and suffered extremely from Orthopnæa. I put her on a course of Elaterium, with diuretics, which afforded her relief in a few days; and she was discharged cured, in the end of February.

After

After having paid particular attention to the management of dropsical cases, during the last twenty-two years, I feel the observations of Aretæus on the disease, in their full strength: διαδιδρήσκουσι

γὰρ τόδε πάγχυ παῦροι ὑπ' εὐτυχίης, καὶ θεῶν μᾶλλον, ἢ τέχνης· τὰ γὰρ μέζονα πάντα ἰῶνται μῆνοι Θεοί.*

The chapter of this discriminating author, on the cure of dropsy, is unfortunately lost, and we are unable to ascertain what remedies he had tried for that purpose.

It is probable that black Hellebore was among the number, because Hippocrates mentions it as an useful hydragogue, in anasarca, at least.

But however discouraging our views must be, respecting the eventual termination of dropsy, in all cases where the effusion depends on diseases of the viscera, it is consolatory to have ascertained the efficacy of a remedy, like Elaterium, which seems to possess a complete power of removing simple effusion, where no

* Περὶ Υδροπικῆς.

organic disorder exists, and of at least alleviating the agonies arising from hydrothorax and ascites, even in the advanced stages of an incurable disease.

The cases which I have given, are not the whole of those in which I have used this remedy; but they exhibit an impartial view of its success. The only additional instances of its exhibition, of which I preserve imperfect recollection, were most favourable to its efficacy.*

I am aware of the readiness with which practitioners are induced to exaggerate the powers of a remedy, which has fulfilled their views, in situations of peculiar anxiety and interest; but I confess that the nearly uniform result which I have experienced, from the exhibition of Elaterium, in hospital, as well as in private practice, has impressed me with

* Several fresh instances of success, with this combination, have occurred to me since these observations were written.

the highest opinion of its virtues. During the last three years, I have made it the leading ingredient in my practice; in this disorder; and though I have deemed it proper, for the benefit of my patients, to join active diuretics with it, yet I am persuaded, that they would have proved inadequate to the favourable results of the cases, without the aid of this excellent hydragogue.

Indeed I have been convinced, for several years, that modern practice has been much injured, by an affectation of simplicity in prescription, in defiance of the experience of past ages; which has degenerated in some instances, into inertness of composition, and in others, into a thoughtless repetition of a few medicines, applied without discrimination, in most cases. To prescribe, as CRASHAW expresses it, "Certain hard words, made into pills," is a wretched prostitution of a noble art. But this is very different from the powerful combinations which are to
be

be found in the works of the older medical writers. The *farrago*, which was the standing jest of medical men, not many years ago, must contain unsuspected powers; or it would not have been employed by such physicians as SYDENHAM, WILLIS, or HOFFMAN. This appears to me a subject of great interest and curiosity, deserving the investigation of intelligent observers. I have found the combination of many liquid diuretics eminently useful; and I have been pursuing, for some years past, inquiries into the effect of a farrago of narcotics, from which I flatter myself that beneficial consequences have resulted, a view of which I may hereafter communicate to the public.

It may appear to some persons a fanciful idea, but I have been led by my observations to suspect, that there exists, in the relative effects of medicines, something similar to the harmony of colours and sounds; and that the impulse requisite

site to the living powers of the body, which cannot be produced by a single impression, may be effected by a concurrence or succession of impressions, in some measure dependant on each other.

It appears, from some of the cases which I have mentioned, that even Elaterium suffers a diminution of its power, from repeated exhibition. In this event, the action of the kidneys may be again excited, by combining it with black Hellebore or Gamboge, and by giving the Syrupus Rhamni, with Oxy-mel of Colchicum, and a liquid preparation of Squill, at proper intervals.

From my experience of the action of Elaterium, it appears to be particularly exerted in stimulating the absorbent vessels. If this fact should be confirmed by farther trials, it would lead to an extension of its employment, in diseases for which at present we can scarcely be
said

said to possess any remedy. In all cases of præternatural changes in the growth and organization of parts; in the enlargement and induration of internal glands, in morbid accumulations of animal oil, and in the destructive process generated by hydatids, we might find some resource in this active stimulant. But this is advanced simply as a conjecture; for my experience does not, at present, warrant any hopes of so flattering a nature.

OF DIABETES.

OF DIABETES.

SINCE the publication of the second edition of my Medical Histories and Reflections, I have met with several new cases of Diabetes, a short view of which may be found useful, in settling our ideas respecting the cure of that uncommon and obstinate disease.

In delivering these facts, I shall confine myself to the essential points of each case, without entering into unnecessary details; being persuaded, that the parade of submitting every minute occurrence to the reader, is not only nugatory but prejudicial, as tending to mislead his attention from the real indications, and
to

to fix it on contingent circumstances, which are often quite unconnected with the natural history of the complaint.

CASE I.

Joseph Fletcher was admitted, July 1, 1811. He was emaciated, had a foul tongue, and uneasy sensations in the testicles. His urine did not exceed five pints in quantity, during twenty-four hours, but it was found, by experiment, to contain a considerable proportion of saccharine matter. He had been ill about ten months. He was ordered half a drachm of Cinchona, and half a drachm of Uva Ursi, with half a grain of Opium, to be taken with Lime-water, four times a-day. He was also directed to live entirely on animal food. On the 7th, his urine was reduced to four pints and a half, and on the 10th to three pints and a half. During this period, he was generally constive, and required frequent doses of Castor-oil. From the 11th of July

July to the 13th, he passed only three pints of water, in twenty-four hours. It was still found to contain an equal proportion of saccharine matter, though his general health was improving. From the 14th to the 25th of July, he only passed two pints and a half of urine, in twenty-four hours, and the proportion of saccharine matter was still undiminished. He was now made an out-patient, and I continued to receive accounts of him, for some weeks, when his urine having become brackish, and his health being restored, he was discharged cured.

In this very curious case, we have an example of Diabetes Mellitus, where the urine was scarcely in quantity greater than natural, at the commencement of the disease; and long before its conclusion was reduced much below the natural standard, without a diminution of the relative quantity of saccharine matter.

Yet the general debility and emaciation were as remarkable, as if he had been voiding urine in very great quantities. The analysis of the urine was made by Dr. W. Henry, so that no doubt of its accuracy could exist.

CASE II.

Samuel Barnes was admitted, Sep. 30, 1811. He made six quarts of urine, in twenty-four hours, which contained a considerable quantity of saccharine matter. He was emaciated and weak, but his tongue was tolerably clean. He was put on a course of Cinchona with Uva Ursi and Opium, with Lime-water, and animal diet.

On the 3rd October, he only passed two quarts and one pint of urine, in twenty-four hours, but in November it again increased in quantity, as the subjoined table will shew.

On

On the 13th December, his gums inflamed, and put on a scorbutic appearance; and in three days more, they became ulcerated.

On the 13th February, his gums were still sore. The urine was now reduced to four pints and a half, or five pints, in twenty-four hours, and was becoming brackish.

On the 24th February, his gums were healing. In the beginning of March, his urine was not more in quantity, than in his usual health; it was brackish, and as he appeared well in every respect, he was discharged cured.

	DRINK.	DIABETIC FLUID.
1811.	Quarts.	Quarts.
Nov. 1.	4	4
2.	4	3, 1 pint and half
3.	3, 1 pint	3, 1 pint and half
4.	4	4, 1 pint
5.	3, 1 pint and half	2, 1 pint and half
6.	2, 1 pint	2, 1 pint
7.	3, 1 pint and half	3, 1 pint
	D 2	Nov. 8.

	DRINK.	DIABETIC FLUID.
1811.	<i>Quarts.</i>	<i>Quarts.</i>
Nov. 8.	3	2, 1 pint and half
9.	2, 1 pint and half	2, 1 pint and half
10.	2, 1 pint and half	2, 1 pint
11.	4	4
12.	3, 1 pint	3, and half pint
13.	3	3
14.	3	2, 1 pint and half
15.	3, and half pint	3
16.	4	3, 1 pint and half
17.	3, 1 pint	3, 1 pint
18.	4, and half pint	4, and half pint
19.	3, and half pint	2, 1 pint
20.	3, 1 pint	3, 1 pint and half
21.	2, 1 pint	2, 1 pint and half
22.	2, 1 pint and half	2, 1 pint
23.	3, and half pint	2, 1 pint
24.	3, 1 pint	3, and half pint
25.	3, 1 pint	3, and half pint
26.	4	3, and half pint
27.	3, and half pint	2, and half pint
28.	3, 1 pint and half	2, 1 pint and half
29.	3, 1 pint and half	3
30.	3, and half pint	2, and half pint
Dec. 1.	3, 1 pint and half	3
2.	3, 1 pint	3, 1 pint
3.	4, and half pint	4
4.	3, and half pint	3
5.	4	3, and half pint
6.	2, 1 pint and half	2, 1 pint
7.	3, 1 pint	3
8.	3	2, pint

Dec. 9.

		DRINK.	DIABETIC FLUID.
1811.		<i>Quarts.</i>	<i>Quarts.</i>
Dec.	9.	3, and half pint	3
	10.	2, 1 pint and half	2, 1 pint
	11.	2, 1 pint and half	2, 1 pint and half
	12.	3, 1 pint	3
	13.	3, 1 pint	3, and half pint
	14.	3, and half pint	3
	15.	3, 1 pint	3, and half pint
	16.	4, and half pint	3, 1 pint
	17.	3, and half pint	2, 1 pint
	18.	3, 1 pint and half	2, 1 pint
	19.	3, 1 pint and half	3
	20.	3	2, 1 pint
	21.	3, and half pint	2, 1 pint and half
	22.	3, 1 pint	2, 1 pint and half
	23.	3, 1 pint	3
	24.	3, and half pint	3
	25.	3, 1 pint	3
	26.	3, 1 pint and half	3
	27.	3, and half pint	2, 1 pint
	28.	3, 1 pint	2, 1 pint and half
	29.	4, and half pint	3, and half pint
	30.	4	3, and half pint
	31.	3, 1 pint and half	3
1812.			
Jan.	1.	3, 1 pint	2, 1 pint and half
	2.	3, 1 pint and half	3, and half pint
	3.	4	3, and half pint
	4.	4	3
	5.	3, and half pint	3
	6.	4, and half pint	3, and half pint
	7.	4	3

		DRINK.	DIABETIC FLUID.
1812.		<i>Quarts.</i>	<i>Quarts.</i>
Jan.	8.	3, 1 pint and half	2, 1 pint and half
	9.	3, 1 pint and half	3
	10.	3, 1 pint and half	3
	11.	3, 1 pint and half	2, 1 pint and half
	12.	3, 1 pint	3
	13.	4	3
	14.	3, 1 pint	2, 1 pint and half
	15.	3, 1 pint	3
	16.	3, 1 pint and half	2, 1 pint and half
	17.	3, 1 pint and half	3, and half pint
	18.	3, 1 pint and half	3, and half pint
	19.	3, 1 pint and half	3, and half pint
	20.	4	3, and half pint
	21.	3, 1 pint and half	2, 1 pint and half
	22.	3, 1 pint	3, and half pint
	23.	3, 1 pint and half	3
	24.	3, 1 pint and half	3, and half pint
	25.	3, 1 pint and half	3, and half pint
	26.	4	3, and half pint
	27.	4	3, 1 pint
	28.	4	3, and half pint
	29.	3, 1 pint and half	3, and half pint
	30.	4	3
	31.	4	3, 1 pint
Feb.	1.	4	3, and half pint
	2.	3, 1 pint and half	3
	3.	4	3, and half pint
	4.	4	3, 1 pint
	5.	4	2, 1 pint and half
	6.	3, and half pint	2, 1 pint and half
	7.	3	2, 1 pint

Feb. 8.

OF DIABETES. 55

		DRINK.	DIABETIC FLUID.
1812.		<i>Quarts.</i>	<i>Quarts.</i>
Feb.	8.	3, and half pint	2, 1 pint
	9.	3	2, 1 pint
	10.	3	2, 1 pint
	11.	3	2, and half pint
	12.	3	2, 1 pint
	13.	3, and half pint	2, 1 pint
	14.	3	2, 1 pint
	15.	2, 1 pint	2, and half pint
	16.	3	2, 1 pint and half
	17.	3, and half pint	3
	18.	3	2, and half pint
	19.	3, and half pint	2, and half pint
	20.	3	2, and half pint
	21.	3	2, and half pint
	22.	3	2, and half pint
	23.	3, and half pint	2, 1 pint
	24.	3, and half pint	2, 1 pint
	25.	3	2, 1 pint
	26.	3	2, 1 pint
	27.	3, and half pint	2, 1 pint
	28.	3, and half pint	2, 1 pint and half
	29.	3	2, 1 pint and half
March	1.	3	2, 1 pint and half
	2.	3	2, 1 pint and half
	3.	3	2, 1 pint
	4.	3	2, 1 pint
	5.	2, 1 pint and half	2, and half pint
	6.	3	2, 1 pint
	7.	3	2, 1 pint and half
	8.	2, 1 pint	2, 1 pint
	9.	3	2, 1 pint and half

In this case, scurvy seemed to be artificially produced, by the patient's strict adherence to the exclusive use of animal food. The occurrence of this adscititious disease did not appear to influence the progress of the Diabetes, in any respect.

This patient afterwards relapsed, from inability to procure animal food.

CASE III.

Thomas Wainwright was admitted, November 4th, 1811. He made six quarts of water, in twenty-four hours, containing the usual proportion of saccharine matter. He was feeble, emaciated, and had a thick, dry crust on the tongue. He was put on the usual course Uva Ursi and Opium with Cinchona, Lime-water, and animal diet.

His bowels soon became so much disordered, by his confinement to animal food, that it was necessary to order him

Astringents

Astringents with Opiates, and to allow him a proportion of vegetable food.— Very little impression was made on the disease, by resuming the tonic plan and animal diet, as will be perceived by the table.

On the 6th February, his teeth became loose, and his gums were ulcerated.

Finding no material alteration in his symptoms, he was discharged as an out-patient, March 10th, 1812.

	DRINK,	DIABETIC FLUID.
1811.	Quarts.	Quarts.
Nov. 5.		
6.		
7.	3	4, 1 pint
8.	3	4, and half pint
9.	3	4, 1 pint
10.	3	4, 1 pint
11.	3, 1 pint	4, 1 pint and half
12.	3	4, 1 pint and half
13.	3, 1 pint	4, 1 pint and half
14.	3, 1 pint	4, 1 pint
15.	3, and half pint	4, and half pint
16.	3, 1 pint	4, 1 pint and half
		Nov. 17,

	DRINK.	DIABETIC FLUID.
1811.	<i>Quarts.</i>	<i>Quarts.</i>
Nov. 17.	3, 1 pint	4, and half pint
18.	3, and half pint	4
19.	3, 1 pint	4, 1 pint and half
20.	3, 1 pint	4, 1 pint and half
21.	3, and half pint	4, 1 pint
22.	3, and half pint	4, and half pint
23.	3, and half pint	4
24.	3	4
25.	3, and half pint	4, and half pint
26.	3,	3, 1 pint and half
27.	3, and half pint	4, and half pint
28.	3	4, and half pint
29.	3, 1 pint	4, 1 pint
30.	3, 1 pint	4, 1 pint and half
Dec. 1.	3, 1 pint and half	4, 1 pint
2.	3, and half pint	4, 1 pint
3.	3, and half pint	4, and half pint
4.	3, and half pint	4
5.	3, and half pint	4
6.	3	4
7.	3, 1 pint	4
8.	3, and half pint	4
9.	3, 1 pint	4
10.	3, and half pint	3, 1 pint and half
11.	3, 1 pint	4
12.	3	3, 1 pint
13.	3, and half pint	3, 1 pint and half
14.	3, and half pint	4
15.	3, 1 pint	4, and half pint
16.	3	3, 1 pint
17.	2, 1 pint and half	3, and half pint
		Dec. 18.

	DRINK.	DIABETIC FLUID.
1811.	<i>Quarts.</i>	<i>Quarts.</i>
Dec. 18.	3	3, 1 pint
19.	3	3, 1 pint and half
20.	3, and half pint	4
21.	3, and half pint	3, 1 pint and half
22.	3, 1 pint	4
23.	3	3, 1 pint
24.	3	3, 1 pint and half
25.	3	3, 1 pint
26.	3, and half pint	4
27.	2, 1 pint and half	3, and half pint
28.	3	3, 1 pint
29.	3	3, 1 pint
30.	3, and half pint	3, 1 pint
31.	3, and half pint	4
1812.		
Jan. 1.	3, 1 pint	3, 1 pint and half
2.	3	3, 1 pint
3.	3	3, and half pint
4.	3, and half pint	3, 1 pint and half
5.	3, 1 pint	4
6.	3, and half pint	3, 1 pint and half
7.	3	3, 1 pint and half
8.	3	3, 1 pint
9.	3	3, 1 pint
10.	2, 1 pint and half	3, 1 pint
11.	2, 1 pint and half	3, and half pint
12.	2, 1 pint and half	3, and half pint
13.	3	3, 1 pint
14.	3, and half pint	3, 1 pint
15.	3	3, and half pint
16.	3	3, 1 pint and half
		Jan. 17.

60 OF DIABETES.

	DRINK.	DIABETIC FLUID.
1812.	<i>Quarts.</i>	<i>Quarts.</i>
Jan. 17.	3	3, 1 pint
18.	3, and half pint	3, 1 pint
19.	3	3, 1 pint
20.	3, and half pint	3, 1 pint
21.	3, and half pint	3, 1 pint and half
22.	3, and half pint	3, 1 pint
23.	3	3, 1 pint
24.	3	3, 1 pint and half
25.	2, 1 pint and half	3, 1 pint
26.	3	3, 1 pint
27.	3	3, 1 pint
28.	3	3, 1 pint and half
29.	3, and half pint	3, 1 pint and half
30.	3, and half pint	3, 1 pint
31.	3, 1 pint	3, 1 pint and half
Feb. 1.	3, and half pint	3, 1 pint and half
2.	3, 1 pint	3, 1 pint and half
3.	3, and half pint	3, 1 pint and half
4.	3, 1 pint	4
5.	3, and half pint	3, 1 pint and half
6.	3, and half pint	4
7.	3, and half pint	3, 1 pint and half
8.	3, and half pint	4
9.	3	3, 1 pint
10.	3	3, 1 pint
11.	3	3, 1 pint and half
12.	3, and half pint	3, 1 pint and half
13.	3, and half pint	3, 1 pint and half
14.	3, 1 pint	4
15.	3, and half pint	3, 1 pint and half
16.	3, 1 pint	3, 1 pint and half
		Feb. 17,

	DRINK.	DIABETIC FLUID.
1812.	<i>Quarts.</i>	<i>Quarts.</i>
Feb. 17.	3, 1 pint	3, 1 pint and half
18.	3, and half pint	3, 1 pint and half
19.	3, and half pint	3, 1 pint
20.	3, and half pint	3, 1 pint
21.	3	3, 1 pint
22.	3, and half pint	3, 1 pint
23.	3, 1 pint	3, 1 pint and half
24.	3, 1 pint	3, 1 pint
25.	3, and half pint	3, 1 pint and half
26.	3	3, and half pint
27.	3	3, 1 pint
28.	3, 1 pint	3, 1 pint and half
29.	3, 1 pint	3, 1 pint and half
March 1.	3, and half pint	3, 1 pint and half
2.	3, and half pint	3, 1 pint
3.	3	3, 1 pint
4.	3, and half pint	3, 1 pint and half
5.	3, 1 pint	3, 1 pint
6.	3	3, and half pint
7.	3, and half pint	3, 1 pint
8.	3, and half pint	3, and half pint
9.	3	3, 1 pint

OUT-PATIENT.

10.	3, and half pint	3, 1 pint
11.	3	3, 1 pint
12.	3, and half pint	3, 1 pint and half
13.	3, 1 pint	3, 1 pint and half
14.	3, 1 pint	4
15.	3, and half pint	4
16.	3, 1 pint	4
17.	3, 1 pint	4, and half pint

March 18.

	DRINK.	DIABETIC FLUID.
1812.	<i>Quarts.</i>	<i>Quarts.</i>
March 18.	3, 1 pint	4, and half pint
19.	3, and half pint	4
20.	3, 1 pint	4, and half pint
21.	3, 1 pint	4, 1 pint
22.	3, 1 pint and half	4, 1 pint and half
23.	3, 1 pint	4, 1 pint
24.	4	4, 1 pint and half
25.	3, 1 pint	4, 1 pint and half

In this case, also, scurvy was produced, by the continuance of animal diet, without any material alteration in the diabetic symptoms.

Wainwright became much worse, after his discharge from the Infirmary, being unable to procure a sufficient quantity of animal food, by his labour. He was therefore re-admitted in March, 1812; and a few drops of the arsenical liquor were added to each dose of his tonic medicine; but, though his health improved, as there was no prospect of any speedy change for the better, he was discharged relieved, April 16th.

CASE IV.

CASE IV.

Mr. A—n, an elderly man, came to consult me for a diabetic affection, under which he had laboured for some months. His urine varied in quantity, but was much above the natural standard. Half a pint of it yielded, by analysis, upwards of three drachms of saccharine matter. Though his appearance was fresh and strong, yet he had lost much flesh, in the course of the complaint.

He was put on the same plan of tonic medicines and diet, as the preceding patients; and ordered to drink lime-water, and to abstain from all fermented liquors and vegetables.

About a month afterwards, I heard from his surgeon, that he was improved in all respects; that he did not pass more urine than equalled the quantity of liquids which he drank; that his urine
was

was become brackish, and his general health was better. It was very difficult, however, to restrain him from indulging in a glass of mild ale.

My last account of this patient, dated August 21st, 1812, I shall insert in the words of his surgeon, Mr. Newbold of Macclesfield.

MACCLESFIELD, *August 21st, 1812.*

“ My dear Sir,

“ I have not been inattentive (though
 “ I have been tardy in replying to your
 “ letter) to the object of your enquiry,
 “ and have taken some pains to obtain
 “ definite information from a patient,
 “ who, conscious of daily transgressing
 “ the prescribed limits of regimen or
 “ medicine, is not over sincere in his
 “ details. I have much satisfaction in
 “ announcing to you, that though Mr. A.
 “ has for the last five or six weeks taken
 “ no Cinchona or Uva Ursi, or indeed
 “ any

“ any medicine, and withal little or no
“ animal food, his urine does not in
“ quantity at all exceed the quantity of
“ liquids taken, on the contrary it has,
“ in two repeated daily experiments,
“ been rather less; the quantity made
“ in twenty-four hours, during these
“ two days, was rather less than three
“ pints, something strong of ammonia
“ and high-coloured, and on analyzing
“ sixteen ounces of this urine, six
“ drachms of a very dark brown sedi-
“ ment, of the consistence of syrup,
“ was deposited, in which the Ammonia,
“ empyreumatized, so much predomi-
“ nated over the saccharine matter, that
“ little or no sweetness was perceptible
“ in it.”

This patient is now perfectly recovered.

CASE V.

Miss P—n, a young lady, had been troubled for almost a year with dyspeptic

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E

symptoms,

symptoms, and pain in the stomach, for which she had consulted me. In Feb. 1812, she was suddenly attacked by Diabetes, (without any hysterical symptoms,) to the amount of six or seven quarts of urinary evacuation in twenty-four hours. Her surgeon consulted me for her, before I saw her in this state, and was advised by me to give the tonic medicines, lime-water, and animal diet. This had a temporary effect in stopping the disease; but it increased again, and I was then desired to visit her. I found her much debilitated; her legs œdematous; her tongue divided by deep, ulcerated fissures, and her gums ulcerated. The quantity of urine was then nine pints, in twenty-four hours, and the taste was sweet.

I directed a few drops of the *Liquor Arsenicalis* to be given with each dose of the tonics; and as the soreness of the gums and tongue was very troublesome, I desired that she might take some sweet

wort twice or thrice a-day. This, however, seemed to increase the diabetic affection, and was soon laid aside. The disease went on with great obstinacy, though the oedematous swellings of the legs were removed, though the fissures of the tongue healed, and her general strength was recruited.

The following table will shew the progress of the complaint.

	DRINK.	DIABETIC FLUID.
1812.	Quarts.	Quarts.
Feb. 6.	3	4
7.	3	4
8.	3	4
9.	4	6, and sweat
10.	3	4
11.	3	4, 1 pint
12.	2, 1 pint	4
13.	2, 1 pint	4
15.	2, 1 pint	5
16.	3	5
17.	2, 1 pint	4
19.	2	3, 1 pint
20.	2	3, 1 pint
23.	2	4
24.	2	5

1812.	DRINK.	DIABETIC FLUID.
	Quarts.	Quarts.
Feb. 25.	2	4, 1 pint
26.	2	4
27.	2	5
28.	2	3, 1 pint
29.	2	3, 1 pint
March 1.	2, 1 pint	3, 1 pint
2.	1, 1 pint	2
6.	3	4, 1 pint
7.	3	5, 1 pint
8.	2, 1 pint	6, 1 pint
9.	2	4, 1 pint
10.	2, 1 pint	5
12.	2	3, 1 pint
13.	3	5, 1 pint
14.	3, 1 pint	5, 1 pint
15.	3	6, 1 pint
16.	2, 1 pint	6, 1 pint
17.	2, 1 pint	6
18.	2	7
19.	2	5, 1 pint
20.	2, 1 pint	5
21.	2	4, 1 pint
22.	2, 1 pint	4, 1 pint
23.	2	4
24.	2, 1 pint	3
25.	2	4, 1 pint
26.	2, 1 pint	6
27.	2, 1 pint	5, 1 pint
28.	2, 1 pint	4, 1 pint
29.	2	4, 1 pint
30.	2	5, 1 pint

March 31.

	DRINK.	DIABETIC FLUID.
1812.	<i>Quarts.</i>	<i>Quarts.</i>
March 31.	2, 1 pint	4, 1 pint
April 1.	2, 1 pint	5, 1 pint
2.	2	5
3.	2, 1 pint	5
4.	2	5
5.	2	5
6.	2, 1 pint	6
7.	2	5

Here my information ended, respecting this patient. I understand, that she was attacked by ileus, and died almost as soon as the surgeon could arrive to her assistance.

CASE VI.

George Slater, about forty years of age, was admitted, July 13th, 1812. His urine tasted sweet, and he passed about four quarts in twenty-four hours. He was put on animal diet, lime-water, and the boluses composed of Cinchona, Uva Ursi, and Opium. The existence of saccharine matter, in the urine, in

the usual proportions, was ascertained by evaporation.

The following table will shew the progress of the complaint.

1812.	DRINK.	DIABETIC FLUID.
	Quarts.	Quarts.
July 14.	3, 1 pint	4
15.	3	3, 1 pint
16.	3	3, 1 pint
17.	3	3, 1 pint
18.	3, 1 pint	3, 1 pint
19.	3	3
20.	3	3
21.	3	3, 1 pint
22.	2, 1 pint	3
23.	2, 1 pint	3
24.	2	2, 1 pint
25.	2, 1 pint	3
26.	2, 1 pint	2, 1 pint
27.	2	2, 1 pint
28.	2	2, 1 pint
29.	2	2, 1 pint
30.	2, 1 pint	3
31.	2, 1 pint, 4 oz.	3
Aug. 1.	2	2, 1 pint and half
2.	2	2, 1 pint
3.	2	2, 1 pint
4.	1, 1 pint, 4 oz.	2
5.	1, 1 pint	1, 1 pint and half
		Aug. 6.

	DRINK.	DIABETIC FLUID.
1812.	<i>Quarts.</i>	<i>Quarts.</i>
Aug. 6.	2	2
7.	1, 1 pint, 4 oz.	1, 1 pint and half
8.	2	2
9.	2	2, and half pint
10.	1, 1 pint	2, 1 pint and half
11.	1, 1 pint	2, 1 pint and half
12.	1, 1 pint and half	2, 1 pint and half
13.	1, 1 pint and half	2
14.	1, 1 pint and half	2, 1 pint and half
15.	2	2, 1 pint and half
16.	1, 1 pint and half	2, 1 pint and half
17.	2	2
18.	1, 1 pint and half	2, 1 pint and half
19.	2	2, 1 pint and half
20.	2	2
21.	2	2, 1 pint and half
22.	2	2, 1 pint
23.	2	2, 1 pint and half
24.	2	2, 1 pint and half
25.	1, 1 pint and half	1, and half pint
26.	1, 1 pint	1, and half pint
27.	1, 1 pint	1, and half pint
28.	1, 1 pint	1, and half pint

His urine was now quite of the natural flavour, and under the natural quantity; upon examination it yielded no saccharine matter, and his general health was completely re-established. He was therefore discharged cured.

CASE VII.

Robert Burgess, about forty-four years of age, admitted June 22nd, 1812, had been ill of Diabetes about four months. His urine contained, by experiment, nearly half an ounce of saccharine matter, to eight ounces of fluid. He was emaciated, sallow-complexioned, and complained of internal flutterings, and sometimes of pain. His tongue was foul.

He was ordered the usual course of Cinchona, Uva Ursi and Opium, with lime-water, and animal diet. The quantity of fluid passed by the kidneys was upwards of three quarts in twenty-four hours.

The following table exhibits the course of the disorder.

June 25.

	DRINK.	DIABETIC FLUID.
1812.	<i>Quarts.</i>	<i>Quarts.</i>
June 25.	1, and half pint	3
26.	1, and half pint	3, 1 pint
27.	1, and half pint	3, and half pint
28.	1, and half pint	3, and half pint
29.	1, and half pint	3, and half pint
30.	1, and half pint	3
July 1.	1, 1 pint	2, 1 pint and half
2.	1, 1 pint	3, and half pint
3.	1, 1 pint	3
4.	1, and half pint	3, and half pint
5.	1, 1 pint	2, 1 pint and half
6.	1, 1 pint	2, 1 pint and half
7.	1, 1 pint	3
8.	1, 1 pint	3
10.	1, 1 pint	2, 1 pint and half
11.	1, 1 pint	3, and half pint
12.	1, 1 pint	2, 1 pint and half
13.	1, 1 pint	3
14.	2	3, and half pint
15.	1, 1 pint	3, and half pint
16.	2	3, and half pint
17.	2	3
18.	2	3
19.	2	2, 1 pint and half
20.	2	3
21.	2	2, 1 pint
22.	2	3
23.	2	3, 1 pint and half
24.	2	3, 1 pint and half
25.	2	3
26.	2	2, 1 pint and half
		July 27.

	DRINK.	DIABETIC FLUID.
1812.	Quarts.	Quarts.
July 27.	2	2, 1 pint
28.	2	3
29.	2	3
30.	2	2, 1 pint
31.	2	2, 1 pint
Aug. 1.	2, 1 pint	2, 1 pint and half
2.	2, 1 pint	2, 1 pint
3.	2	2, 1 pint
4.	2	2
5.	2	2, 1 pint
6.	2	2
7.	2, 1 pint	2, 1 pint
8.	2	2, 1 pint
9.	2, 1 pint	2
10.	2	2
11.	2	2
12.	2	2, and half pint
13.	2	2
14.	2	2
15.	2	2, and half pint
16.	2	2
17.	2	2
18.	2	2
19.	2	1, 1 pint
20.	2	2
21.	2	2
22.	2	1, 1 pint and half
23.	2	2
24.	2	2
25.	2	2
26.	2	2

Aug. 27.

	DRINK.	DIABETIC FLUID.
1812.	Quarts.	Quarts.
Aug. 27.	2	2
28.	2	2, and half pint
29.	2	2
30.	2	2
31.	2	2, and half pint
Sep. 1.	2	2
2.	2	2
3.	2	2
4.	2	2
5.	2	1, 1 pint and half
6.	2	1, 1 pint and half

His urine was now natural, both in quality and quantity; his health and strength were restored; he was therefore discharged cured, Sep. 7, 1812.

CASE VIII.

Jonathan Whitaker, fifty years of age, was admitted, Sep. 1st, 1812. He made an unusual quantity of urine, especially in the night, was weak, emaciated, and had a foul tongue. His urine was not at all sweet to the taste; and on being evaporated, was not found to contain
saccharine

saccharine matter. This may be regarded, therefore, as a case of simple Diabetes. The quantity of urine discharged in twenty-four hours was nearly five quarts.

He was ordered Cinchona, Uva Ursi and Opium, in the usual form, and was directed to live on animal food.

I subjoin the table of his complaint. It was begun, previous to his admission.

	DRINK.	DIABETIC FLUID.
1812.	Quarts.	Quarts.
Aug. 26.	1, 1 pint	1, 1 pint and half
27.	1, 1 pint and half	2
28.	1, 1 pint	2
29.	2	2, 1 pint and half
30.	2, and half pint	3
Sep. 1.	2, 1 pint	3, and half pint
2.	2, and half pint	3
3.	2, 1 pint	4, 1 pint
4.	2	4, and half pint
5.	2, and half pint	4
6.	2, and half pint	4, 1 pint
7.	2, and half pint	4
8.	2	3

Sep. 9.

		DRINK.	DIABETIC FLUID.
1812.		<i>Quarts.</i>	<i>Quarts.</i>
Sep.	9.	2, and half pint	3, 1 pint and half
	10.	2	3
	11.	2, and half pint	3, 1 pint
	12.	2, 1 pint	4
	13.	2	3, 1 pint
	14.	2, and half pint	4
	15.	2	3
	16.	2, and half pint	3
	17.	2, and half pint	3, and half pint
	18.	2	3, 1 pint
	19.	2, 1 pint	3, and half pint
	20.	2	3
	21.	2, and half pint	3, 1 pint and half
	22.	2	3, 1 pint
	23.	2	3
	24.	1, 1 pint and half	2, 1 pint
	25.	1, 1 pint and half	2, 1 pint and half
	26.	1, 1 pint	2, 1 pint
	27.	1, 1 pint	2, 1 pint
	28.	1, 1 pint and half	2, 1 pint and half
	29.	1, 1 pint	2, and half pint
	30.	1, 1 pint	2, and half pint
Oct.	1.	1, 1 pint and half	2, 1 pint
	2.	1, 1 pint and half	2
	3.	1, 1 pint	2, and half pint
	4.	1, 1 pint	2, and half pint

He now declared that he felt himself perfectly restored to health. He was therefore discharged cured, Oct. 5th.

CASE IX.

CASE IX.

Thomas Pollitt had been ill of Diabetes for four months, when he was admitted an in-patient, Sept. 11th, 1812. His urine was found, by experiment, to contain a considerable proportion of saccharine matter. He passed upwards of four quarts of water, in twenty-four hours, at the time of his admission. He was directed the Cinchona, Uva Ursi, Lime-water and Opium, in the manner already described, and was restricted to animal diet. The following table will shew the progress of his cure, which was not accompanied with any peculiar circumstances.

1812.		DRINK.	DIABETIC FLUID.
		Quarts.	Quarts.
Sep.	11.		4, 1 pint
	12.		3, 1 pint
	13.		4
	14.		3
	15.	2	3
	16.	2, and half pint	3, 1 pint
	17.	2, 1 pint	3
	18.	3	3, 1 pint
	19.	3, 1 pint	4, and half pint
Sep. 20.			

1812.	DRINK. Quarts.	DIABETIC FLUID. Quarts.
Sep. 20.	3	3, 1 pint and half
21.	3	3, 1 pint and half
22.	3, 1 pint	4, and half pint
23.	3	4, 1 pint
24.	3, 1 pint	3
25.	3	4
26.	4	4, 1 pint
27.	4, 1 pint	4, 1 pint
28.	4	4, 1 pint
29.	3, 1 pint	4
30.	4	5
31.	2, 1 pint	2, 1 pint and half
Oct. 1.	3	3, and half pint
2.	2, 1 pint and half	3
3.	2, 1 pint	3
4.	2, 1 pint	2, 1 pint and half
5.	2, and half pint	2, 1 pint
6.	2, 1 pint	2, 1 pint and half
7.	2, 1 pint	3
8.	2, 1 pint and half	3
9.	2, 1 pint	2, 1 pint and half
10.	3	3, 1 pint
11.	2, 1 pint	3
12.	2, 1 pint and half	3
13.	2, 1 pint	2, 1 pint and half
14.	2, 1 pint and half	3
15.	2, 1 pint	2, 1 pint and half
16.	3	3, and half pint
17.	2, 1 pint	2, 1 pint and half

He was discharged, perfectly cured,
Oct. 17th, 1812.

*

Robert Burgess, re-admitted Dec. 22d, 1812, was passing four quarts of water in twenty-four hours. The existence of saccharine matter in his urine was ascertained, by experiment. He was ordered, Uva Ursi, with Cinchona, and Opium, and was confined to animal diet. He recovered rapidly under this treatment, and went out, apparently in perfect health.

	DRINK.	DIABETIC FLUID.
1812.	Quarts.	Quarts.
Dec. 22.	2	4
23.	2	3, and half pint
24.	1, 1 pint	3, 1 pint
25.	2	3
26.	2	3
27.	2	3
28.	2	3, 1 pint
29.	2	3, 1 pint
30.	2	3, 1 pint
31.	2	3, 1 pint
1813.		
Jan. 1.	2	3, 1 pint
2.	2	3, and half pint
		Jan. 3.

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		DRINK.	DIABETIC FLUID.
1813.		<i>Quarts.</i>	<i>Quarts.</i>
Jan.	3.	1, 1 pint	3
	4.	2	3
	5.	2	3
	6.	2, and half pint	3, 1 pint
	7.	2	3
	8.	2, and half pint	3, and half pint
	9.	2, and half pint	3, 1 pint
	10.	1, 1 pint and half	3
	11.	1, 1 pint and half	3
	12.	2	3
	13.	2, and half pint	3, 1 pint
	14.	2, and half pint	3, 1 pint
	15.	2, and half pint	3, 1 pint
	16.	2, and half pint	3, 1 pint
	17.	2	3
	18.	1, 1 pint and half	3
	19.	2	2, 1 pint
	20.	2	2, 1 pint and half
	21.	2	3
	22.	2	3
	23.	2, and half pint	3
	24.	1, 1 pint and half	2, 1 pint and half
	25.	1, 1 pint and half	2, and half pint
	26.	2	3
	27.	2, and half pint	3
	28.	2	2, 1 pint and half
	29.	2	2, 1 pint
	30.	2, and half pint	3
	31.	1, 1 pint and half	2, and half pint
Feb.	1.	2	2, 1 pint and half
	2.	2	2, 1 pint and half

		DRINK.	DIABETIC FLUID.
1813.		<i>Quarts.</i>	<i>Quarts.</i>
Feb.	3.	2	2, 1 pint
	4.	2	2, 1 pint
	5.	2, and half pint	2, 1 pint
	6.	2	2, and half pint
	7.	2	2, and half pint
	8.	2	2, 1 pint
	9.	2	2, 1 pint
	10.	2	2, 1 pint
	11.	2	2, 1 pint
	12.	2	2, 1 pint
	13.	2	2
	14.	2	2

CASE X.

Joseph Tomlinson was admitted, March 29th, 1813. He had long suffered from symptoms of Diabetes, and was passing a very considerable quantity of the fluid, containing saccharine matter. His father, I understood, had died of the same disease.

Tomlinson was put on the usual course of tonics, opium, and animal food. After remaining a short time in the hospital, he

he sunk rapidly, and died with every symptom of exhaustion.

On opening the body, the kidneys were found enlarged and flaccid, but not otherwise diseased.

Some marks of inflammation appeared in the pleura.

I had an opportunity, lately, of seeing Winterbottom, whose case was detailed in the second edition of the first volume of this work; and he informed me that he had continued free from Diabetes, from the time of his leaving the hospital, then four years.

Upon reviewing the number of Diabetic cases, which it has fallen to my lot to conduct, during the last twenty years. I have the satisfaction of perceiving, that the mode of treatment which I have been led to adopt has been attended with considerable success. Out of thir-

teen cases, of which I have preserved minutes, ten have been cured, and two much relieved. This is an encouraging result of practice in a disease, which, till within a few years, was reckoned incurable.*

Several other cases have come under my notice, some of which have terminated favourably; but as patients of this class are often irregular in calling on their physician, and are careless in attending to a disagreeable regimen, when they begin to recover, I cannot give an accurate account of them.

Sufficient evidence, I trust, has been produced, of the efficacy of tonic medicines, gentle opiates, and animal diet, in this disease; in this respect, the essential object of my researches has been attained.

* From whatever cause it may proceed, it is remarkable, that I have seen many more cases of Diabetes, within the last twelve months, than in the whole of my preceding practice.

But

But in attending to the morbid appearances, and the connexion of symptoms in Diabetes, while I felt myself dissatisfied with the opinions which have hitherto prevailed, respecting the theory of the disease, I could not help forming, insensibly, an hypothesis of my own, which I shall now submit to the candid consideration of my readers.

My first impressions respecting the treatment and nature of Diabetes were derived chiefly from Dr. Sydenham. That great physician had seen few cases of the disorder, but his sagacity led him to consider it as a disease of debility. On this idea I began the tonic practice. When my opportunities of observation became more frequent, I referred to the older medical writers, with little advantage.

The ancients knew little of Diabetes : Hippocrates has not mentioned it, and Galen saw only two cases. Aretæus has
F 3 indeed

indeed described it in his usual masterly style. The leading appearance of the disease, 'σαρκῶν καί μέλεων ἐς ὕρον ἡ ξύντηξις, (in his emphatic phrase), the 'melting of the flesh and members into urine,' did not escape his notice. But the change in the quality of the fluid, passing through the kidneys and bladder, was unknown to him. He supposed it to consist of the drink taken in, and discharged unchanged.

Mercatus has given an accurate history of the disease in every respect, excepting the peculiar alteration in the diabetic fluid, which he mentions as the *potus immutatus*.

Sennertus fell into the same error; though his account of the symptoms is otherwise just.

Dr. Willis was the first writer who observed the peculiar appearance of the diabetic fluid, and who remarked that it
tasted

tasted as if sugar or honey had been dissolved in it. He imputed the disease to a dissolved state of the blood, and his opinion seems to have prevailed, till the time of Dr. Cullen.

The theory which supposes Diabetes to depend on a formation of saccharine matter, in the stomach, in place of chyle, though published by Dr. Dobson, appears to have been originally taught by Dr. Cullen, in his lectures. It was subsequently supported by the fanciful genius of Darwin, but derived its principal strength from the observations of Dr. Rollo.

One of the most remarkable phænomena of the disease, the rapid transmission of fluids taken into the stomach, through the kidneys, had attracted the attention of Sennertus and Bartholin, who endeavoured to account for it without success.

This symptom has indeed puzzled all late observers, who have occupied themselves with its consideration, as earnestly as the old navigators searched for the supposed north-west passage. Sennertus suspected some communication between the liver and emulgent vessels. Bartholin referred the cause, vaguely, to the then newly-discovered lacteals.* Dr. Darwin's conjecture of a retrograde motion in the lymphatics is so incompatible with their structure, that it requires no confutation.

We find nothing useful in the writings of the ancients respecting the cure of this disease. Aretæus recommends the use of the same remedies as those given in dropsy; and as the chapter on the cure of dropsy is lost, we remain ignorant of his method.

* Bonet. *Anatom. Practic.* p. 1267. De viis per quas potus nequaquam immutatus in Diabete excernitur.

Mercatus recommends the most nourishing kind of animal food, and mucilaginous substances, for the patients' regimen.

Dr. Willis, with a similar regimen, joined the use of lime-water.

Dr. Rollo's plan of animal diet, in this disease, has however all the merit of a discovery; and he has done much service, by directing the attention of the faculty in a particular manner to this complaint.

After revolving in my mind the morbid appearances which I had witnessed, I could not find reason to believe that the saccharine matter originated in the stomach. I have, at this time, two diabetic patients under my care,* whose complexions are ruddy and distinct, and who, though reduced in size, have too

* Mr. A——n, and Geo. Slater.

healthy

healthy an appearance to admit of Dr. Rollo's supposition of depraved action in the stomach. Yet these persons have been ascertained, by experiment, to pass a large proportion of saccharine matter with their urine. And in Fletcher's case, the patient was cured, though he was passing an equal proportion of saccharine matter, while the diabetic fluid was lessened in quantity.

If we reckon the proportion of saccharine matter to the quantity of diabetic fluid, only as an ounce to a pint, in many cases, twelve or fourteen ounces of a substance resembling molasses must, on this supposition, be formed in the stomach every twenty-four hours. It would then be possible to render it obvious to the senses, by evacuating the contents of the stomach, at a proper time after eating. Dr. Cullen's supposition did not go to this extent. He only asserted some defect of assimilation; but as he assumed saccharine matter to be
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the basis of nutritious substances,* he would probably have inclined to an opinion similar to that of Dr. Rollo.

It is sufficient to object to this opinion, that the proof of the existence of saccharine matter in the stomach and bowels is totally wanting.

I have seen nearly a complete suspension of assimilation in the stomach and bowels, without any diabetic symptom whatever.

I had occasion, several years ago, to visit a gentleman, who, in consequence of extraordinary exertions in business, which required constant walking, had lost the power of digestion. His food, when solid or fibrous, both of the animal and vegetable kind, was evacuated by the anus unchanged. Much debility, and occasional spasms in the stomach, were

* In his *Materia Medica*.

the principal symptoms of the complaint, which was readily removed, by allowing proper time for rest, after dinner, and by a temporary change of occupations.

Some of the older writers have fancied that there was a resemblance between Lientery and Diabetes, but without justice. In Lientery, the chyle is hurried through the intestines, without being taken up by the absorbent vessels, but there is no increase in the quantity of the urine. In Diabetes, on the contrary, the contents of the stomach and bowels appear, as far as they can be examined, to be in a natural state, while a morbid secretion is passing through the kidneys and bladder.

That the functions of the chylo-poëtic viscera are much disturbed, in Diabetes, cannot be doubted by any person who has seen the disease. The foul tongue, covered with a thick, dry, yellow crust, or divided by ulcerated fissures ;

tures; and the frequent disorders in the bowels, the devouring thirst, and sensation of internal heat and fluttering, indicate great disorder in the stomach and intestines. These symptoms, however, may be accounted for upon other principles, which I shall explain hereafter.

Much error seems to have been caused, in reasoning on this disease, from continuing the name of urine to the fluid discharged by the urinary passages, while the evidence of the senses, and chemical analysis, prove that it is a secretion totally different from the natural contents of the kidneys and bladder. It appears, indeed, from an interesting observation of Dr. Henry,* that, even in the height of Diabetes, the functions of the kidneys are not totally suspended, and that they continue to secrete a small portion of urine; but I conceive that

* See his remarks on the diabetetic fluid of two of my patients. *Med. Hist. and Reflect.* vol. i. p. 144, 2nd edit.

the greater quantity of fluid passing off by them can no more be said to be secreted by those organs, than the bile which they often transmit in large quantities, during obstructions to the passage of bile into the intestines.

Dr. Henry's observation serves to explain a fact, which several of my patients have mentioned to me, that the taste of the diabetic fluid discharged by them varied at different times of the day ; that in the morning it had more of a urinous flavour, and became sweeter in the afternoon, and during the night.

It is no uncommon occurrence in diseases, to find large quantities of natural or morbid secretions passing through the kidneys, or deposited in different cavities of the body. Besides the familiar instance of bile, carried off, in its proper form, by the urinary passages, in jaundice, or deposited under the skin, we know that urine, in ischuria, is carried

ried from the kidneys and bladder, and deposited under the membranes of the brain; and that pus, and even the calcareous matter of the bones, are in like manner removed from one part of the body to another, without preventing the organs through which they pass from exercising their proper functions, or at least, without disturbing them in any remarkable degree. To this operation, which is well known by the name of Metastasis, I am inclined to refer the deposition of the diabetic fluid in the kidneys.

In what specific manner the process of Metastasis is performed, we cannot, in the present state of knowledge, explain. The difficulty is not greater in the case of Diabetes, than in some other diseases. But there is evidently, in Diabetes, a defect in the supply of nutritious matter, for the repair of the parts absorbed, and in consequence, an increased action of the absorbent vessels, which

which go on decomposing the solids, till the utmost degree of emaciation takes place, and till ulcerations in the tongue and gums, and sometimes even of the kidneys themselves, take place. I was formerly induced to believe, that Diabetes was produced by some local disease in the kidneys; but my increased opportunities of observation have led me to change that opinion. The external and internal ulcerations which I have seen in the kidneys of patients who have died of Diabetes may well be referred to the extreme irritation which they undergo, in transmitting such unusual quantities of a foreign body.

The ulcerations of the kidneys, which take place in aged persons, have not been observed to produce Diabetes.

Thus far, then, I agree with the opinion of Dr. Cullen, that the supply of nourishment for the solid parts is interrupted. Having shewed, that the defect
of

of assimilation does not appear to take place in the first passages, it remains to be enquired, where this interruption is produced. It cannot happen in the lungs, because saccharine matter does not exist in any large quantity in the blood of diabetic patients. Whatever alterations may have been observed, or fancied, in the blood drawn from them, they bear no kind of proportion to the quantity of morbid secretion, passing off by the kidneys. Indeed it is probable that these changes are such only as exist in all cases of chronic debility, when blood-letting is not usually resorted to, and where the appearance of the blood is consequently unknown.

The animal body is in a constant state of change and renewal, the particles removed by the absorbents being replaced by the action of the extreme vessels. It is the function of these minute agents to convert their contained fluid into muscular fibre, ligament, nerve,



or bone. In local diseases, they form purulent matter and granulations, for the cure of wounds, they reproduce the cutis and cuticle after accidents; unite the bones after fractures; and appear, from Dr. Hunter's preparations, to be themselves converted, upon occasion, into the parts whose formation they have prepared.

If these vessels should, from any cause, take on a morbid action, and instead of supplying nutritious matter, should form a substance which cannot be applied to renew the waste of the system, the diseased secretion must either accumulate, in the intermediate passages of the circulation, where it would produce hectic fever, (by absorption) and subsequently death, or it must be carried off by some of the emunctories, to which its stimulus must cause an increased determination of fluids. This I conceive to be precisely the case, in Diabetes.

The

The matter resembling molasses, which forms so large a constituent part of the diabetic fluid, having acquired a tendency towards crystallization, cannot be applied to the purposes of nutrition. Its presence in the vessels destined to that office, operates as a stimulus from a foreign body; it is therefore hurried, perhaps by the circuit of anastomosing branches, to the kidneys, exciting, by its quality, increased action in the whole system of vessels connected with those organs. and is discharged with an effort resembling that, which enables the stomach to clear itself of offensive matters contained in it.

The progress of the symptoms, in Diabetes, renders it probable, that the diseased action of the extreme vessels is sometimes only partial, and that it becomes general in fatal cases. The cases of Fletcher, Burgess and Slater prove this. The two latter patients never were so much emaciated as most of the per-

sons whom I have seen in this disease, though, at the time of their admission, their urine contained the usual proportion of saccharine matter.

That there is considerable variety in the application of nutritious particles, by the extreme vessels, might be shewn by various arguments. I shall only notice one deviation, which is not incompatible with general health. It appears in persons who become very corpulent, notwithstanding the use of exercise, and the strictest temperance in their regimen. In these cases, the extreme vessels separate an unusual quantity of animal oil, and are deficient in supplying the muscular fibres. Sometimes the accumulation of oil is carried to a degree of local disease, and by a partial increased action of the vessels, produces steatomatous tumors, in the cellular membrane, or in the cavity of the abdomen.

That the seat of morbid action lies in the

the extreme vessels, is rendered farther probable, by the increased action of the exhalents, in Diabetes. The similarity of this species of effusion, to that which constitutes dropsy, when the fluid is poured into the cellular, or reflected membranes, induced some of the older writers to term Diabetes the “*hydrops matulæ*.”

My opinion may be farther illustrated, by the similarity of process which takes place in continued fevers.

Although the theories of the proximate cause of fever, proposed by Boerhaave, Hoffman and Cullen differ in points of importance, yet all these authors agree in considering it as an obstruction of some kind, in the extreme vessels. We might therefore expect, that some of the phænomena of continued fever should resemble those of Diabetes. Accordingly, (setting aside the febrile paroxysms, occasioned by the

re-action of the heart and large arteries) we perceive the tongue covered with a crust, which frequently resembles that which occurs in Diabetes; we see the emaciation of the body proceed in a similar manner; and we observe the formation of morbid substances in the urine, occasioning the sediment. If these substances are formed by the extreme vessels, the connection between their appearance in the urine, and the intervals of the febrile paroxysms, admits a ready explanation. In typhus, where the disease sometimes extends to the length of two or three months, the morbid urinary sediment becomes a continued process, like the formation of saccharine matter in Diabetes.

If we now turn our view to the nature of the remedies, which my experience has proved to be effectual in the cure of Diabetes, it will be found to agree exactly with the theory which I have ventured to propose. To correct such
a state

a state of disease as I have supposed to exist in the extreme vessels, it would be necessary to support, for a considerable time, a tonic action on the circulating system; to keep the brain and nerves, as well as the sanguiferous vessels, under the constant, but gentle influence of Opium; and to strengthen the kidneys in particular. In point of regimen, it would be requisite to supply the stomach with those substances which would be most completely convertible into good chyle, and least likely to produce superfluous acidity in the process of digestion. It is evident that all these objects would be most readily accomplished, by the very plan of treatment which I have adopted, and which has been so completely justified by its success.

In some of the cases which I have given, the ulcerations of the tongue and gums, which so frequently attend Diabetes, did not appear, till the patients had lived for five or six weeks on animal

food alone, and put on an appearance strongly resembling scurvy. I was not inclined to consider them as diabetic symptoms, in these instances, because the patients were recovering, at the time of their appearance; and the emaciation of the body being suspended, I could not impute the ulcerations to increased action of the absorbent vessels. In the case of Miss P—n, the increased action of the exhalents was such as to produce considerable effusion into the cellular membrane, at the beginning of the complaint, and the ulcerations of the tongue or gums shewed themselves at the same time.

In the case of Burgess, the progress of recovery was distinctly marked, by the increased quantity of urea, and the diminution of saccharine matter, in the diabetic fluid.

In some other cases, this observation did not apply. The return of health
was

was only perceivable, from the clearing of the tongue, the restoration of natural appetite, and the improvement of the complexion; the saccharine matter still passing in equal proportions, though in smaller quantities. When Slater was passing little more than two quarts of brackish tasted urine in 24 hours, it yielded an extract precisely resembling treacle, in appearance, but not at all sweet, in the proportion of an ounce, to a pint of fluid.

I have been unable to assign any particular remote causes for the occurrence of Diabetes. Most of my patients have been industrious men, addicted to no excess of any kind; some of them living moderately well, others, especially within the last two years, faring very scantily. As far as my experience extends, Diabetes appears to have increased in frequency, of late years. Perhaps the greater use of vegetables, among the industrious poor, and
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the diminished consumption of animal food among them, occasioned by its dearness, may contribute to render this disease more common. Yet in the neighbouring agricultural districts, where animal food is seldom tasted by many of the labouring poor, the disease is hardly known, and it generally occurs among persons employed in manufactures.

The flaccidity of the kidneys, which has been remarked in dissecting diabetic subjects, can only be referred, I apprehend, to the debility of the system.

If it should be objected to the opinion which I have hazarded, on this subject, that I have attributed too much to the supposed morbid state of the extreme vessels, I would beg leave to observe, that the consideration of the state of these vessels has, in my opinion, been too much overlooked, in the theory of chronic diseases. In all disorders which arise from, or are attended with organic changes

changes in the parts, especially in the viscera, the extreme vessels are the very instruments employed in producing these changes.

Whatever tends to throw new light on their pathology is therefore of essential importance. And though much of their action, both in a healthy and morbid state must for ever escape our inquiries, yet it can never be useless to keep in our view their incessant activity, which subsists even after the death of the heart and arteries,* and their wonderful power of repairing, and even forming the solid parts of the body. If a direct influence over their movements could be obtained, by any fortunate discovery, the physician might then be truly said to hold the keys of the constitution in his hands.

I have confined my observations to the Diabetes Mellitus, as I have met

* It has been observed, that the hair and nails continue to grow, for some time after death.

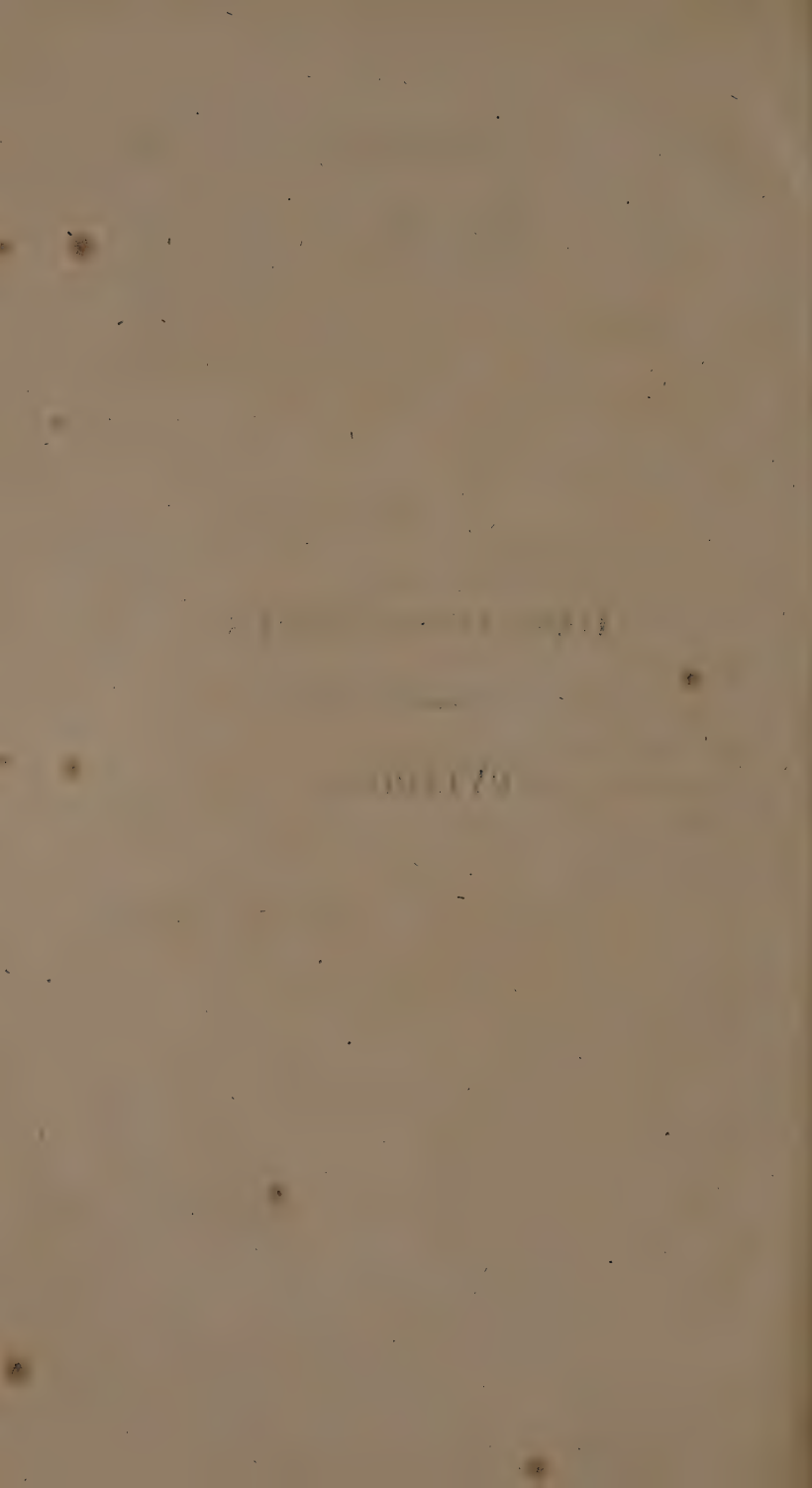
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with very few cases of the Diabetes insipidus which could be properly reckoned idiopathic.

CASE OF SCIRRHUS

OF THE

PYLORUS.



CASE OF SCIRRHUS OF THE PYLORUS.

A Gentleman, about forty-four years of age, of a florid complexion, and full, but robust habit, was attacked, in May, 1803, by the Influenza, which left his stomach debilitated, and was followed by a bilious complaint. Occasional sickness and vomiting continued to harrass him, through the months of June, July and August.

He went to Buxton in the middle of July, and staid three weeks, where he bathed, and drank a little of the water.

At

At that time he was free from sickness for ten days together, which was the longest interval of ease he had then experienced. During his stay at Buxton, he had a copious discharge of urine, which appeared to relieve him exceedingly.

On the 22nd of August, he went to the sea-coast, and had a return of his sickness, during several days. He then discontinued his medicines (which were of the tonic kind) for three days and a half, during which his sickness left him. He recovered so rapidly, that on the fourth day, he took a long ride, and on his return, was attacked, for the first time, with pain in the right side, in the region of the pylorus, which he imputed to a sudden blast of cold wind. Much flatulency attended this seizure, and he found himself so ill, that he was obliged to go to bed, on his return to the inn. His sickness returned in the evening, and continued afterwards, with intervals
of

of twenty-four hours. When the sickness was over, after the discharge of the contents of the stomach, his appetite was good, and even keen; but decreased again, till the return of the nausea. Every accession of sickness and vomiting weakened his voice in a remarkable degree, and occasioned general debility.

The pain now returned frequently, which he sometimes thought was occasioned by walking, but he could bear exercise on horseback, or in the carriage, whilst his strength enabled him to use them.

He returned home in September, and I found him much altered in his appearance. His person was much emaciated; his face hollow and ghastly; and he had contracted the habit of applying his hand almost consequently to the right side.



The fits of vomiting now came on very suddenly, at irregular periods, sometimes once in two or three days, sometimes every day; often with very little previous nausea. The contents of the stomach were discharged with great violence, with a projectile force which carried them to the distance of two or three yards. From the quantity of fluid vomited, at intervals of some days, it was evident that only a small portion of the food received into the stomach passed into the intestines, and the nature of the disease became apparent.

From the obstruction to the passage of food, and the frequent recurrence of vomiting, he now became extremely costive.

As I now entertained little doubt, that a scirrhus affection of the pylorus was taking place, I endeavoured to lessen the local irritation by opiates, and to
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keep up the peristaltic motion of the lower bowels, by small doses of the Tincture Alöes, whenever it was possible to steal a passage for them through the pylorus. By these means, and by giving liquid food in small quantities at a time, a suspension of the pain and sickness was frequently procured. Milk was generally the most grateful article of food; and the patient frequently thought himself much relieved by a small glass of mild, home-brewed ale.

So much were the symptoms mitigated, by this mode of treatment, that he obtained a complete intermission of pain and sickness, during a fortnight. His spirits and strength were then recruited; his voice became nearly natural; and he took a sufficient quantity of nutriment, which was digested and passed through the intestines, in the usual manner.

But at the end of this period, the vomiting

vomiting was renewed with increased severity; his voice was again reduced, almost to a whisper; and his strength began to give way rapidly.

At length, in November, he ceased to retain the smallest quantity of food for any considerable time; his head drooped, like that of a new-born infant, and he expired, worn out with sufferings, and deprivation of nourishment.

The body was opened, after death, by my much lamented friend, the late Mr. Gibson. Every part was sound, in the thorax and abdomen, excepting the pylorus. It was scirrhus in all its substance, and would scarcely have admitted a small crow quill through its opening.

I have given the particulars of this case, because it exhibits in the clearest manner, the characteristic symptoms of this dreadful, and at present, incurable complaint.

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It shews also, that the morbid action, in cases of this kind, is not uniformly progressive, but is occasionally suspended, so as to flatter the patient with hopes of recovery. This circumstance is indeed common, in most chronic diseases.



FINIS.

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